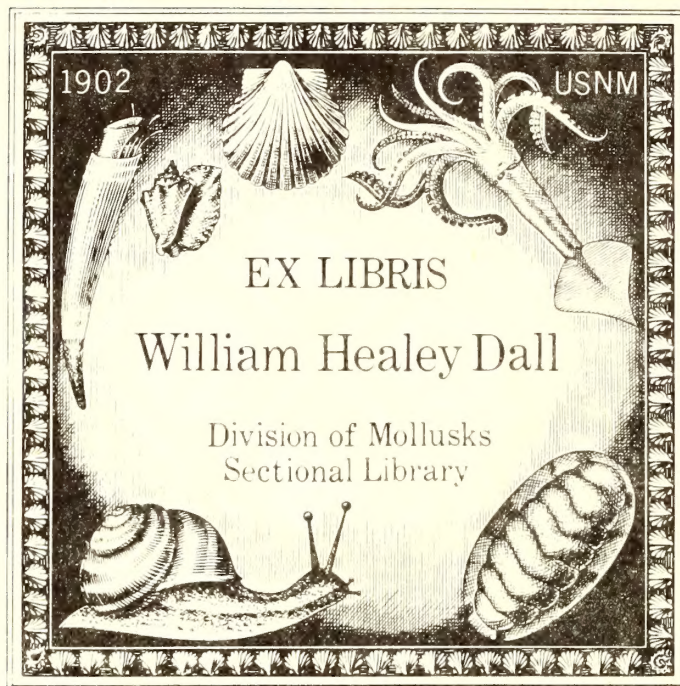






Division of Mollusks
Sectional Library

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A DEFENSE OF THE RIGHT TO DISAGREE

By John Q. Burch

From the dawn of history all challenges of established ideas have met with emotional and at times physical defense. Galileo dropped his two balls and proved the truth of his theory to all thinking men. He challenged a ruling doctrine and proved it false. The very truth almost cost him his life as we know from history.

The humble efforts of this writer offers no such definite conclusion, if indeed, such a demonstration is possible when dealing with the marvels of life.

The intention has been to defend the right to search for the truth, and to refuse at times, to continue the attempt to pound the well known square facts into the round holes given us by some authorities.

MINUTES

JAN 17 1937

COMMISSION

CHURCH OF THE

WELFARE

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We are not happy to hear that you are not able to contribute to the fund for the welfare of the church.

All interested persons are cordially invited.

Please call all names in the list of names, and if you are unable to do so, please call the names of the persons who are unable to do so.

A LIST OF THE NAMES OF THE PERSONS WHO ARE UNABLE TO DO SO.

From the time of the first meeting of the committee on the welfare of the church, we have been working to help the persons who are unable to contribute to the fund for the welfare of the church.

The people of the church are very interested in the welfare of the church, and we are sure that they will be able to help the persons who are unable to do so.

The interest has been in the welfare of the church, and we are sure that they will be able to help the persons who are unable to do so.

Why should a question of any apparently accepted theory be a controversial matter, and even if it does become such, will airing the clash of ideas necessarily be disastrous?

The Priority Rule in Zoological Nomenclature

Without exception the most difficult matter to explain to an educated beginner are the reasons for asking him to change a large part of the names of his specimens every time an author publishes a book. It seems as if all writers manage to dig up some obscure and previously unknown references to upset everything published to that date.

He must be assured that it is logical and that to ever question the law is analagous to treason or blasphemy.

Inasmuch as our cherished rule is invariably met with derision and facetous remarks about the I.Q. of all systematists, it may be of passing interest to some that this rule has been a matter of bitter controversy almost from it's inception.

Has zoological nomenclature been added to the list of other " Sacred Cows", and therefore above criticism ?

I find in my library work by some scholarly writers of professional standing who are simply outlaws, and flatly refuse to accept some such revolutionary changes.

There are others who have endeavored to salvage the system by introducing some form of stability. A bibliography of such papers would be extensive.

One paper on my desk this evening will be a fair example of many similar attacks. This paper was written by Dr. Th. Mortensen and published in the Annals and Magazine of Natural History, 1912. Dr. Mortensen may not be well known to students of mollusks, but his great publications on echinoderms place his name with the great zoologists of all time.

The title of this paper is " A Vote Against the Strict Application of the Priority Rule in Zoological Nomenclature." All matter following in quotation marks will be from this paper, and anything else may be attributed to J.Q.B.

Is it not as well to quote directly the views of others when your own thoughts are derived from those views ? The choice of an excerpt from another's work should be sufficient, and preferable to merely presenting the same thought in your own words.

We recall with amusement the occasion when a lengthy paper was ' lifted' from these Minutes and published in print in a far more pretentious journal. The amusing thing was that there were no quotation marks and no credit given to us, but our several typographical errors were also lifted intact. We should have been flattered.

We offer no other excuse for the frequent inclusion of direct quotations in these papers. J.Q.B.

(Con.)

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The purpose of this effort was to establish an Official List of Generic Names, with their genotypes, but this will appear later. However, it is obvious that such a measure would be futile if adopted when there is no limitation of the meaning of the taxon we call a genus. The last line is not entirely true because, much to the annoyance of some current authors, there seems to be no way of making more genera than there are species in any one group. Of course, the species may be split up ad infinitum, and each placed in a nice new genus. J.Q.B.

" In the ' Zoologischer Anzeiger', Bd. xxxvi, no. 24, Nov., 22, 1910, and in the ' Annals' for December, 1910, is published a note from the International Commission on Zoological Nomenclature inviting all zoologists to send to the Secretary of the Commission a list of 100 zoological names which they consider should be studied in connection with the preparation of an official list of generic names, and further, to send a separate list of 50-100 generic names in their specialty which they look upon as the most important and most generally used; each of these latter names should be accompanied by the full and complete original bibliographical reference, by the name of the type species, and the name of the order to which the genus belongs.

On the base of the study of the lists sent in the Commission promises to submit to the next Congress an Official List of Generic Names, with their genotypes, proposing that this list should be adopted and that in the future " no zoologist shall upon Nomenclatorial grounds change any name in said list unless he first submits to the Commission his reasons for making the change and unless the Commission considers the reasons valid."

" This invitation was the result of a proposition presented to the International Commission on Zoological Nomenclature from the British Association for the Advancement of Science and the Eastern Branch of the American Society of Zoologists recommending ' that certain very commonly used zoological names should be exempted from the Law of Priority.' The result shows that the Commission has found no reason to accept the proposition of the two Societies; ..."

It seems here that the Commission decided against the proposal for one reason among others that the considerable amount of work involved in the preparation of a list of 50 or more generic names with the bibliographical references caused many specialists to delay. It was assumed that a majority were not in favor of it. J.Q.B.

" We may, then, expect that the result of this invitation will be as poor as that of the Secretary's previous efforts. But if the Commission concludes therefrom that the desire to have the more important zoological names protected against change is not very general among zoologists, that conclusion is certainly ill-founded. On the contrary, it is doubtless the desire of the great majority of zoologists to have the more important, commonly used names protected against the tyranny of this rule of priority, which leads to such extremely unfortunate results when carried out literally in all cases. * To name only a few of the consequences of the strict application of the priority rule: we must not hereafter speak of Actiniae, because the name Actinia was first used for a Holothurian; the Actiniae shall now carry the beautiful name " Priapidae". Holothuria, on the other hand, was, strictly taken, first used for a Salp; therefore the Holothurians are hereafter to be called " Bohadschiodeans"; likewise the Salps are blessed with a new name

The first part of the paper is devoted to a discussion of the general principles of the theory of the structure of the atom. It is shown that the structure of the atom is determined by the laws of quantum mechanics, and that the laws of quantum mechanics are derived from the principles of relativity and the theory of the structure of the atom. The second part of the paper is devoted to a discussion of the application of the theory of the structure of the atom to the study of the properties of matter. It is shown that the theory of the structure of the atom can be used to study the properties of matter, and that the properties of matter can be used to study the theory of the structure of the atom. The third part of the paper is devoted to a discussion of the application of the theory of the structure of the atom to the study of the properties of the universe. It is shown that the theory of the structure of the atom can be used to study the properties of the universe, and that the properties of the universe can be used to study the theory of the structure of the atom.

"Dagysidae". The name Rhombus, used for 2000 years for the turbot, and even used binominally for a hundred years before Linnaeus, shall be given away to a genus of mollusks, because it was so used in 1797 (by Humphreys), while Linnaeus gave the name Pleuronectes to all flat-fishes."

"It may, perhaps, also be justifiable to ask how or wherefrom the Commission of Nomenclature has obtained its mandate as international. This part of the question may, however, be passed over, since everybody doubtless will agree that it is most desirable to have the zoological nomenclature regulated by international rules. But the condition should be that such rules are reasonable, which does not hold good for the strict application of the priority rule in the opinion of many zoologists. Of how many?

A way of ascertaining how many zoologists desire to follow the priority rule strictly in all cases and how many want to have the more important names excepted from the rule would be to send an inquiry to all zoologists of the world- and it would involve no trouble worth speaking of to the zoologists to answer the question. In this way a reliable proof of the position of the majority of zoologists toward this much disputed rule might be obtained.

That it will be possible to carry out such a general vote without great difficulty seems beyond doubt, and as proof of this is here offered the vote of the Scandinavian and Finnish zoologists.

The result of the vote is very striking. Of the 122 names there are 2 (two) for strict application of the priority rule in all cases, which means less than 2 per cent. It may, perhaps, not be unreasonable to conclude from this result that the number of those zoologists who swear to the strict application of the priority rule is upon the whole very small, the great majority wishing to have the more important names preserved unaltered.

It is to be hoped that the zoologists of other countries will follow the example given here. When this has been done, and it has been definitely proved that the great majority object to the strict application of the priority rule, it may perhaps be expected that the tyranny of that notorious law which has already done so much harm to science, will be thrown off; and then perhaps, the International Commission will see that it is rather its duty to arrange for the codification of the desired names in accordance with the wishes of the zoologists.

It should be pointed out that for the above introductory notes the author (Dr. Th. Mortensen) is alone responsible."

"One of the chief difficulties in arranging this vote has been in drawing the limit. It has been thought best to apply to the professional zoologists, not including anatomists, paleontologists, or amateur zoologists. But, upon the whole, it can scarcely be denied that the vote here offered gives really the opinion of the zoologists of Denmark, Finland, Norway and Sweden."

** A lengthy list covering four printed pages gives the names, titles etc. of the zoologists. They seem to all be Dr. phil. and largely university professors but with a few museum curators. The vote is given 120 for a change and 2 for the status quo. JQB.

Dr. G. Dallas Hanna has returned to the Arctic Research Laboratory at Point Barrow, Alaska on special assignment and will spend the winter there. We all love "Doc." and wish him the best, but as for JQB when he makes a move it is almost surely going to be to the south. He considers perhaps the Solomon Islands from a letter here that mentions the coldest night of the year -down to 70 degrees.

The first part of the paper discusses the importance of the study of the history of the United States. It is argued that a knowledge of the past is essential for a full understanding of the present. The author then goes on to discuss the various factors that have shaped the development of the United States, including the role of the government, the influence of the economy, and the impact of the culture. The paper concludes by suggesting that a study of the history of the United States is not only a valuable academic exercise, but also a necessary one for anyone who wishes to understand the world in which we live.

The second part of the paper is a detailed analysis of the role of the government in the development of the United States. The author argues that the government has played a central role in the shaping of the nation, from the early days of the colonies to the present. He discusses the various policies and programs that have been implemented by the government, and the impact that these have had on the development of the country. The author also discusses the role of the government in the economy, and the impact that government intervention has had on the growth of the nation.

The third part of the paper discusses the influence of the economy on the development of the United States. The author argues that the economy has been a major factor in the shaping of the nation, and that the growth of the economy has been a key element in the development of the country. He discusses the various factors that have influenced the growth of the economy, including the role of the government, the influence of the culture, and the impact of the technology. The paper concludes by suggesting that a study of the history of the United States is not only a valuable academic exercise, but also a necessary one for anyone who wishes to understand the world in which we live.

The fourth part of the paper discusses the impact of the culture on the development of the United States. The author argues that the culture has been a major factor in the shaping of the nation, and that the growth of the culture has been a key element in the development of the country. He discusses the various factors that have influenced the growth of the culture, including the role of the government, the influence of the economy, and the impact of the technology. The paper concludes by suggesting that a study of the history of the United States is not only a valuable academic exercise, but also a necessary one for anyone who wishes to understand the world in which we live.

The fifth part of the paper discusses the role of the technology in the development of the United States. The author argues that the technology has been a major factor in the shaping of the nation, and that the growth of the technology has been a key element in the development of the country. He discusses the various factors that have influenced the growth of the technology, including the role of the government, the influence of the economy, and the impact of the culture. The paper concludes by suggesting that a study of the history of the United States is not only a valuable academic exercise, but also a necessary one for anyone who wishes to understand the world in which we live.

PROFESSIONAL COURTESY By John Q. Burch

Proper respect for the work of others is certainly a commendable virtue, and disrespect for scholarly work is often due to ignorance. The occasional error detected from a host of fine deductions should mean no more than a typographical error in a copy of an unabridged dictionary. However, some so-called courtesies make one ponder.

A doctor M.D. must be guilty of little short of murder before another will testify against him. And did you ever try to get a lawyer to sue another ?

Professional zoologists are at times the same. Perhaps the non professional and casual student enjoys a certain advantage. There may be something to the old adage "Fools rush in where angels fear to tread". Nevertheless, there seems to be no sound reason to "fear" a search for the truth even if that be contraversial.

I have among others exactly 5 letters on my desk, and all of them from professional zoologists, scholars connected with great universities or museums. None of them may be mentioned by name in this paragraph, not the groups involved. This will be obvious.

I asked one why he did not prepare a key to the family on which he had done so much work. The confidential letter of several pages makes the matter clear, to wit - "any possible key would throw a number of names into synonymy, and to do this would make enemies of respected colleagues."

** Believe it or not, but three of these letters are from specialists on three entirely different groups, and other than the names of the families and genera involved might read the same.

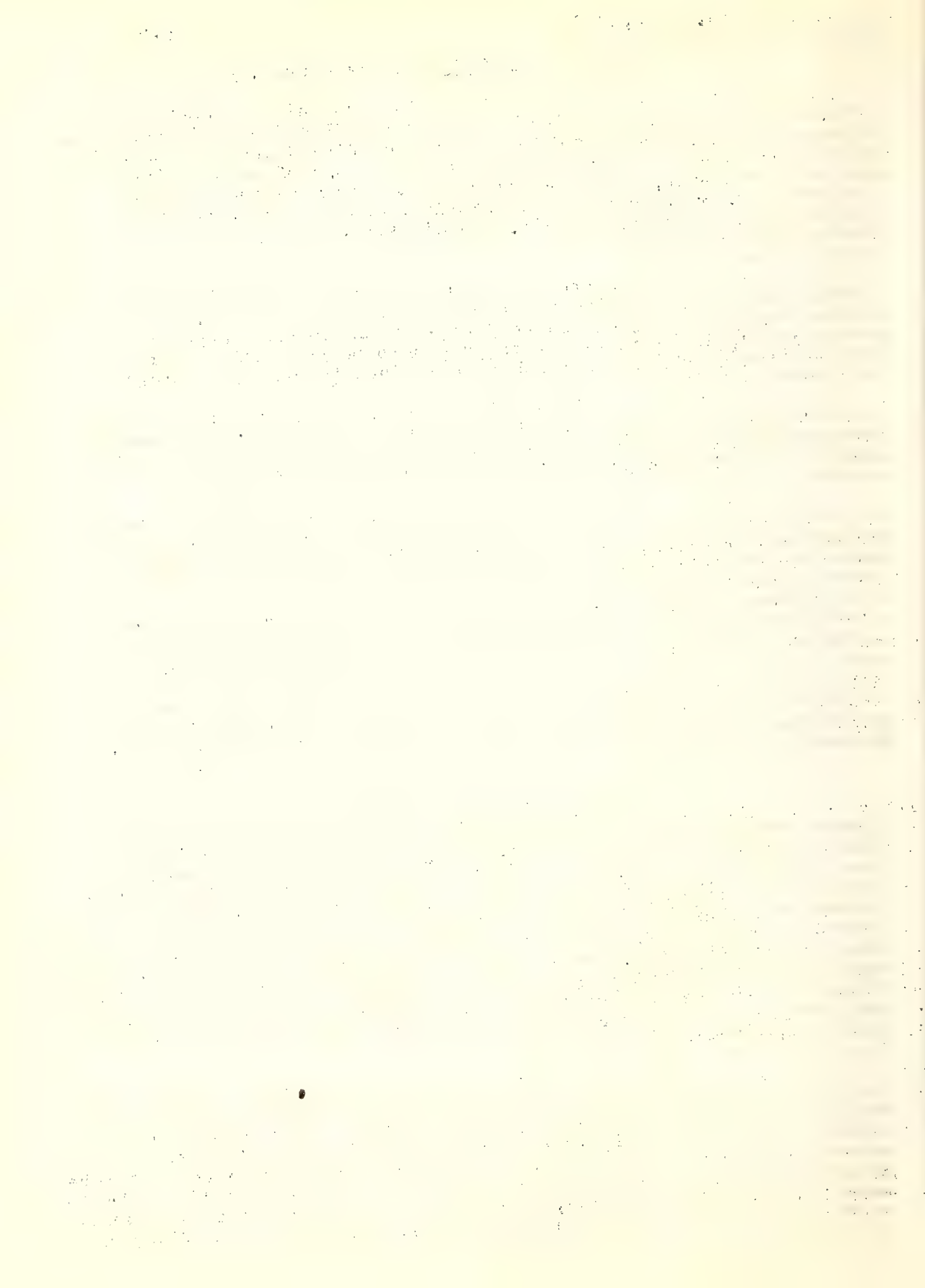
All of this is difficult for me to understand, because when I am wrong, I sincerely appreciate being shown my error, but then perhaps I have been wrong so many times that I am accustomed to it.

J.Q.B.

THE SPECIALIST By John Q. Burch

I have been guilty of frequently repeating the trite saying that this is the day of the specialist, but at times I try to consider the liabilities as well. For example, I recall the occasion when I had lunch with probably the most successful of my college classmates. As corporation council his monthly retainers probably exceed my best year, but it was shocking to me to find that he was one of the most poorly read of all of my varied acquaintances. He knew his legal specialty, and this is the spot for a period. However, please bear in mind that I am one of those who consider a man who does not know who won the last world series something of an ignoramus, not to mention the simply countless things that should to my mind interest every human.

How is it possible to be a specialist and be in daily contact with thousands of fine books? Of course, I am interested in the species concept as a student of mollusks, and disposed to examine the work of many authors. The result is that countless pleasant hours are spent reading books that do not seem to be related to such an interest. For example, I picked up a copy of Dr. A.H. Miller's "Specialization in the Avian Genus Junco", Univ. of Calif., 1941. As an amateur ornithologist I have thumbed Peterson's Field Guides fairly often,



but the phylogenetic relations of birds has been a blank page. However, this monograph on the genus Junco is quite a work and well worth a perusal even if the Rensch terms 'rassenkreis' and 'arten-kreis' may at times be a bit abstruse. A review of this paper would be impossible here, if indeed, I am capable of doing it justice, but the fact that Dr. Miller examined 11,774 specimens from museums all over the world, made many thousands of exact measurements, color records etc. gives one thought. Perhaps the most remarkable thing is that of the many recognizable groups Dr. Miller almost without exception considers them races (or with us they would be subspecies) and not species. I will here refrain from making any facetious comments about what might have happened to these had they been in the hands of some of our coworkers.

Crampton's work on the Partula is an example of comparatively few studies on mollusks that might be comparable.

Henry E. Crampton: Studies on the variations, distribution and evolution of the genus Partula. The species inhabiting Tahiti. Publ. Carnegie Inst. of Wash. no. 228, 313 pp. 1916- 1925-1932.

* I am not sure whether the above are still available from the publishers.

There is a bit of difference between a scholarly study even with erroneous conclusions, and a mere catalogue of differing individuals. If this is a scientific study then so is the boy counting the threads and sorting bolts and nuts in a machine shop doing scientific research.

LEARNING AND INSTINCT IN ANIMALS

It had been my intention to attempt to study the variations in the hinge teeth of an interesting lot of several hundred pelecypods this Sunday afternoon, but as so often occurs, I noticed a copy of a book on the shelf next to the pelecypod cabinet. We had recently sold a number of copies of the work and I became interested in the book, and, well, the shells will wait my leisure some other time.

The title of the book is "Learning and Instinct in Animals" by W.H. Thorpe, published but a month or so ago by Harvard University, Nov., 1956, 493 pages, and profusely illustrated. \$10.00.

The study of comparative animal behavior is certainly not new. I must have hundreds of books on the subject, and I think still have a long run of a periodical by that very name. However, there has been a more concentrated effort along this line in recent years. If you are not familiar with the term "Ethology", this is it, and no doubt a student of animal behavior should be properly called an Ethologist.

As might be feared, our pets, the mollusks are not likely to be insulted by the appellation "egg heads". Nevertheless, some of their behavior is difficult to explain. The author very wisely treats the Mollusca in two chapters, A. Mollusca except Cephalopods, and B. Cephalopoda. As we know the cephalopods display abilities that quite transcend all other groups in the phylum.

It is difficult to select a few items of interest out of a large volume from which hundreds could be taken.

(Con.)

The ability of the fresh water snail Ampullaria gigas to master a "Y" maze after ten trials is discussed. A page of figures is given to show the paths followed by a single individual of the land snail Rumina decollata in mastering a "T" maze.

The habit of certain limpets of returning to their home spot is rather well known, but explained in considerable detail here. In quoting from the unpublished work of Prof. T.A. Stephenson, Margaret Wood et al., the author writes, "They find that Patella granularis in particular, is an active species, going as much as 5 feet from home when on feeding excursions. ... Each individual recognizes its own scar with great accuracy, even when this is sited among a group of others, and returns to it unerringly after excursions. On one occasion only was a specimen seen to return to the wrong scar. Two marked individuals, A and B, had scars situated side by side on the rock, almost in contact. One night, when both limpets were out feeding, A returned first, and sat on B's scar; but almost immediately B came up and pushed A firmly off of it..."

It is distressing to hear that our own children Lottia gigantea and Acaea persona did not do as well in school as their cousins, the Patellas, but even they did better at finding their way home than certain specimens of whom I have only heard rumors among the species Homo sapiens.

The quite remarkable eye and brain of the Octopus has been very thoroughly studied by many anatomists, but the possible extent of associative learning is not too well known. The author here gives a careful record along this line. However, the author finds no proof of many claims made for this group.

Too many stories about them remind one of the talking horse and the like. However, please do not assume that I am questioning anything. I have lived to see things that have been as surprising to me as even a talking horse for that matter.

In conclusion, may I suggest that some of our boys with the aqua-lungs take a recess from spearing fish occasionally, and see if they can find some houses constructed by Octopi etc. It would even be something to photograph in moving color, if one could catch a good light on an Octopus inserting a stone between the open shells of a large pelecypod thus preventing them from closing while the occupant is being devoured. Get this picture and if Walt Disney won't buy that one, I will.

J.Q.B.

A paper often cited is one by Leslie B. Arey and W.J. Crozier "On the Natural History of Onchidium," Journ. Exper. Zool., 32:443-502, 1921. W.H. Thorpe in the book mentioned above discussed it, and I have reference in my card file to the very well known and consistent seller in our store "Natural Communities" by Dr. Lee R. Dice Univ. of Mich., 1952, and 1955 \$7.50. Dr. Dice writes in his great book as follows: "The small, naked, pulmonate mollusk (Onchidium) of Bermuda, is said by Arey and Crozier (1921) to live in small colonies of about a dozen individuals each, which together occupy a "nest". Once a day the members of the colony leave to feed, but all return to the same situation within about an hour. None of the individuals of one nest will enter a foreign nest...". The features

Another book, "The Distribution and Abundance of Animals" by H.C. Andrewartha and L.C. Birch, University of Chicago, 1954 \$15.00, is a scholarly work in this field. It is a very large book of 782 pages illustrated with numerous figures and charts. The authors here discuss in connection with mollusks such subjects as "Influence of light during breeding season", "Influence of moisture on longevity", and a number of matters pertaining rather more to biochemistry such as "uricotelic metabolism" etc.

"The Natural Regulation of Animal Numbers" by David Lack, Oxford University, 1954 \$7.50, is another scholarly treatise that seems to be to be largely devoted to the fluctuations of the sizes of natural populations and suggesting logical explanations for many of them. It is by no means a work on biological control other than that the detailed information should certainly be of inestimable value in such a study. Numerous species of mollusks are discussed throughout the work. For example "large and irregular fluctuations have been found in such mollusks as Abra, Cultellus, and Corbula, which lay many eggs and have pelagic larvae, and much smaller, again irregular fluctuations in other mollusks such as Macoma and Nucula, which lay few eggs and have larvae with a short or no pelagic life (Thorson 1950; see also Dymond, 1948)."

There are entirely too many items of interest to mention here.

Another interesting observation on a cephalopod "A migration more comparable with that of birds occurs in the cuttlefish (Sepia officinalis) which winters on the continental shelf south of England and travels northward in the spring to breed in the North Sea. In this species, as in many birds, the males arrive ahead of the females and the older individuals ahead of the younger. (Verwey, 1949).
J.Q.B.

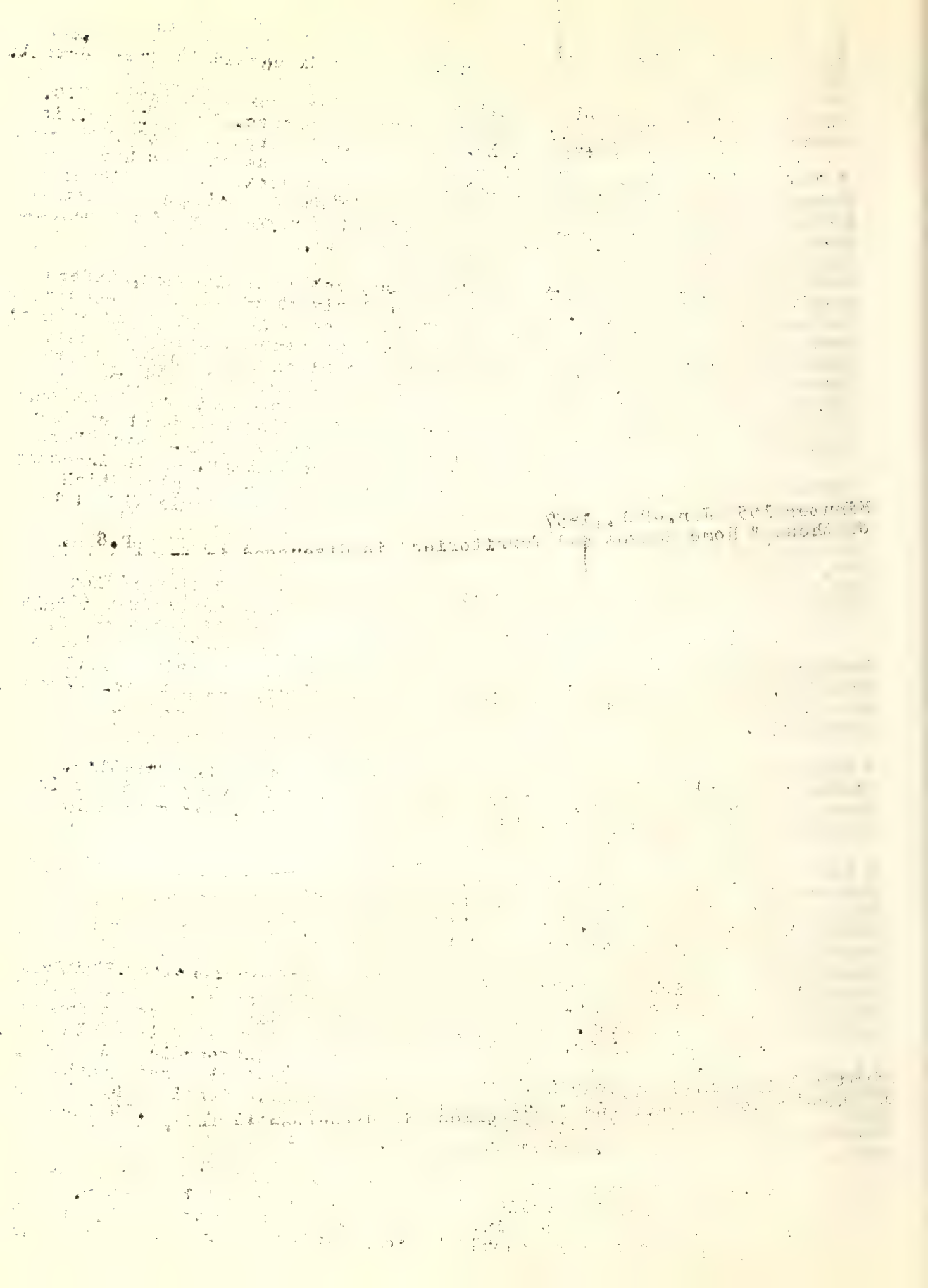
GEOCHRONOLOGY

Having sold many hundreds of books on this subject, evolution, climate of the past, and related matters, and having read a fair part of my wares, I can but quote the poet Omar, who certainly stated it clearly:

"Myself when young did eagerly frequent
Doctor and saint, and heard great argument
About it and about, but evermore
Came out by the same door wherein I went."

I have finished a perusal of a work titled Geochronology, Physical Science Bulletin No. 2, University of Arizona, 1955. \$1.50. Edited by Terah L. Smiley. There are twelve chapters in this symposium by various specialists. The titles are to some extent self explanatory, Geochronical Approach to Temporal Problems, Astronomical Aspects, Geochemistry and Radiochemical Dating, Geological Stratigraphy, Paleontology, Pollen Analysis, Archaeological Stratigraphy, Varve Studies, Geologic-Climatic Method, The C-14 Determining Method, Dendrochronology, Paleoclimatology.

I have found this work of great interest, and perhaps more easily understood than the well known "Dating the Past" by Zeuner. This is one of the most interesting subjects for research, and the University of Arizona should be congratulated for encouraging this work.



Of course, it is obvious that the matter is largely conjecture as far as the older formations are concerned. It is a bit confusing to an amateur collector to dig some fossils out of one of our California deposits, and discover that there are at least three prominent professional paleontologists placing the geologic age far apart, or perhaps a million years or so merely seem important to those who are not familiar with the study.

Paleontology and Biology

One often hears a hearty laugh at some error made by Pliny, Aristotle, or others of the ancient scholars. I am personally a bit amazed at how much they did know. I recall picking up a copy of Aristotle in my shop one day and merely opening it at random where he mentioned that birds with clawed feet such as the hawk and the eagle are carnivorous and cannot eat grain even when stuffed into their mouths. I had to ask a professor of ornithology whether or not it is possible for an eagle to digest grain. Aristotle was right. That certainly showed some original research back there.

There have been many amusing false statements made by modern professional and highly esteemed specialists when venturing out of their own particular field. Perhaps I am wrong, but it would seem that it is possible for a person to take the highest degrees in some of our great universities majoring in zoology without more than elementary paleontology, and the paleontologist may disdain to read anything on biology. Of course, the outstanding persons in both fields are well rounded. Nevertheless, I asked a professor of zoology in one of our great universities if he had students majoring in both biology and paleontology, and he seemed to think it almost a foolish question. Apparently it is quite rarely that one does.

Or is it presumptuous to suggest that one professional scholar collaborate with another when he wishes to write something in the other's specialty? Probably so, because it seems to be human nature to get the idea that because he achieves fame or a million as a blacksmith, this is ample qualification to take over a watch factory or become an international diplomat.

J.Q.B.

Freedom of Expression

I have never known a book seller who was not a firm believer in freedom of the press. Some people have the idea that merely reading a book supporting a theory in disrepute will almost certainly convert the reader. As a matter of fact, it has been my experience that the person who has not considered both sides of any issue is too poorly advised to enter the conversation. We have too many vehement opponents of something of which they know nothing.

As editor of this small mimeographed sheet I recall being urged by a few powerful supporters not to print the papers submitted by a certain individual. The fact that I considered the controversial author better advised than some of his opponents was beside the point. Closing the pages of an informal sheet such as this to anyone who has made a sincere effort to learn something new about a mollusk arouses my indignation. Shades of the founding fathers! And in America of all places. One might think that their forefathers were refugees from freedom in Europe.

J.Q.B.

SOME SPECIFIC CRITERIA IN CONUS

This is the title of a paper written by Burnett Smith, Acad. Nat. Sci. Phil., 1930. The author here was working with a number of Tertiary cones from the Atlantic Coastal Plain and his work involved comparison with Recent material.

" One chief result of the study has been a demonstration of the importance of young stages in specific determination. Somewhat less useful, but apparently of higher taxonomic value, are the characters shown by the subsutural flexure.

The claim cannot be made that every species of Conus has a diagnostic apex, but evidence is presented to show that at least four distinct apical types occur within the genus. It is probable that these four variations are but a small fraction of those which one might encounter among the many species. Such a search would require a very protracted investigation, for most shells are without a studyable apex.

The subsutural flexure in Conus, unlike the apex, is almost always manifest. It shows a striking backward bend of the growth lines, being most conspicuous in the region between whorl angulation and suture. " ... " The supposedly unavoidable guess work brought about by absence of color markings may be completely counteracted if apex and subsutural flexure are well preserved. These morphologic characters are relatively constant in any one species and quite tangible. They compare favorably with most criteria of specific discrimination. However, they were not employed by the older authors ... "

" Apex is here used in a descriptive sense for the early volutions. It denotes the first five or six whorls and includes both the protoconch and post protoconch (conch) immature stages. Later features which, except for gerontic manifestations, persist to the end of the ontogeny, are not ordinarily regarded as belonging to the apex. It has been found necessary to modify this conception slightly to the extent of sometimes including in the apex early accelerated portions of the adult keeled stage. "

" The apical stages noted in Conus are, in order of their appearance:

1. a smooth and rounded stage
2. a rounded stage with fine ribs or rib-like growth lines (curved rib)
3. an angulated and noded stage (noded stage, and
4. an angulated and keeled stage (keeled stage. "

" Of these the first and probably most of the second should be regarded as larval and assignable to the protoconch. The third and fourth are pretty clearly referable to the conch... "

The above is obviously quoted from the paper by Burnett Smith, but cannot clearly describe his work without his figures and other data. However, I made a short study of several lots of Indo-Pacific cones in an effort to follow the characters used by the author. My results were far from conclusive, in fact, confusing, but I did find that a study of the comparatively few juvenile specimens I had indicate the probability that there are at least several divisions in Conus genetically distinct, and at least my preliminary study does not separate species with known identical ecology, anatomy, radula etc. as the present split does.

*** There surely must be other papers and other students who have considered such characters, but I seem to have no record in my card file. Any advice will be appreciated. *** I find that 99% of

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of my collection and stock are fully adult specimens and not suitable for such a study. Any of my friends having juvenile specimens may do me a favor by letting me see them. I will either return them or exchange for them as you prefer. I am annoyed with myself because it seems in this case that the very specimens I wish to study are those that I have been discarding.

J.Q.B.

Miss Julia Rogers, well known to the many thousands who have read and enjoyed her delightful style of writing in The Shell Book, The Tree Book and others, celebrated her 91st birthday, Jan. 20, with open house at her home, 355 Junipero Ave., Long Beach. Miss Rogers has suffered some difficulty with her vision in recent years, but her mind is as gay as that of the beautiful young woman whose portrait is shown in some of her books. It is your privilege to enjoy a talk with her, it is certain that you will recall some of her comments with pleasure days afterward.

Mrs. Edwin C. Roworth passed away on Nov. 17, 1956. Her passing was sudden and unexpected. Ed and Josephine were both interested in all forms of the beauties of nature and have collected shells for many years. Their original home was Rochester, N.Y. They had moved to California several years ago, and had been in their new home, 1301 Winsor Road, Encinitas, Calif. but six months. They had celebrated their fortieth wedding anniversary. Perhaps it is because Rose and I have passed our fortieth wedding anniversary together that I realize how much or how little it means to send our sincere sympathy to Ed.

J.Q.B.

LONG BEACH SHELL CLUB ENTERTAINS THE BARNETTS

Captain Fred Barnett, for the past several years in command of a fishery research vessel out of Honolulu, and now a resident of Hawaii, is still claimed by Long Beach. Fred and his wife, Mary Ann (past president of the club) returned by air for a brief vacation and, of course, to visit their son, Tim, who is now a student in Pomona College. Tim is doing very well indeed and majoring in electronics.

The party was held at the home of John Q. and Rose Burch, 4206 Halldale Ave, Los Angeles on the evening of Dec. 19th. Captain Barnett showed slides and gave an interesting talk not only on the specimens, but of the interesting work being done throughout the islands. The meeting was well attended. Refreshments were served by the committee of the Long Beach Shell Club and it was a pleasant social evening.

Mrs. Crawford Cate entered the Santa Monica hospital for surgery Jan. 15, and we are happy to report that she is doing well and expected to be back with us soon. The only surprising thing is that Jeanne is one whose photograph you would select for the cover of the perfect health magazine, and we are again happy to learn that her difficulty is not serious.

We have learned of the passing of Mrs. Walter F. Webb, wife of Walter F. Webb of St. Petersburg, Florida. Mrs. Webb has been an invalid for a number of years.

Don Wilson, our enthusiastic young member, after taking two degrees at the University of Southern California, has transferred to the University of California at Los Angeles to work for his doctorate. We expect much from Don.

? FUTURE OF THIS PUBLICATION ?

This is closing the 16th year of the Minutes of the Conchological Club of Southern California with John Q. Burch as editor.

I became a member in 1934. Herbert N. Lowe was then president. A.M. Strong, George Willett, U.S. Grant IV, and other serious students were active members, and their many scholarly publications are basic today. The programs would have been a credit to any scientific organization.

When I became editor of the Minutes, it was intended to be a community enterprise for the systematic and ecological study of mollusks. The personalia of the group was incidental.

Many important papers have been mimeographed, and information kept available that would otherwise have been lost.

In our most interesting years we had the active assistance of the late George Willett, A.M. Strong and others. Their scholarly work and constant advice has not been replaced. The assistance of Dr. Myra Keen gave the Minutes scientific stature. The frequent contributions of Allyn Smith, Dr. Joshua Bailly, Dr. W.O. Gregg, Mr. and Mrs. E.P. Chace and many others encouraged the editor to believe that the work was becoming a genuine contribution. Papers representing serious study were sent to the editor regularly.

It must be very obvious that this paper is, with few exceptions, degenerating into a monthly letter of the passing whims and ideas of one writer, J.Q.B.

Several moves are in order. Your opinions are solicited.

First- A new editor, who will be installed with loud acclaim by all, including the old one.

Second- See that more papers are submitted. They may be on any question involving mollusks, and the writers do not necessarily have to be members.

Third- A date can be set and the Minutes terminated.

J.Q.B.

New Publication Received

Catalogue of Molluscan Shells of Yamaguti Prefecture by Dr. T. Kuroda- Yamaguti Museum, 1956. A beautifully bound book of 172 pages, and 25 plates, Roy. 8vo. The text is entirely in the Japanese language, but the figures are clear and the specific characters easily followed. The work is well done. The scientific names are systematically arranged and also included in an alphabetical index. A number of new species are described, and a number of others listed and figured that I have yet to see as specimens.

Family Littorinidae by Bernard C. Cotton, Publication No. 2 of the Malacological Club of Victoria- 4 pages with one plate illustrating 2- species. It is always a pleasure to follow Mr. Cotton's work giving author and date of each genus, author and date of the type species, and other brief notes. Such papers are useful whether on Australia or elsewhere. Copies may be had by mail from J.Q.B. 35¢.

Let's Collect Shells is the title of an excellent booklet on my desk. The author is not given but it is a publicity item put out by the Shell Oil Company. The fundamentals of classification are well described and illustrated with excellent text figures of most of the major divisions. Following the introduction it is thumb indexed to open at "sea shells- what are they", "the shell as an architect", "lets meet some shells", "where to look", "starting a collection...here's how". In fact, I have been guilty of selling much worse publications. It is suggested that you buy a tank of Shell gas and demand a copy.

Proceedings of the Malacological Society of London, Vol. 32, part 3, Dec., 1956. The following papers are to be seen here.

Notes on Alcaeus by L.A.C.W. Venmans. This paper is well written. 7 text figures of radulae and anatomy are shown, the taxonomy is clearly given with the synonymy, followed by a list of references.

The Anatomy of the Six Species of the Molluscan Genus Bulinus (Planorbidae) From Senegambia by Christopher A. Wright pp 88-104 with one plate of photographic illustrations of species plus five others. The history of the group is given, a key to species, careful anatomical work described, closing with many references.

The Distribution of Potamopyrgus jenkinsi (E.A. Smith) in Windermere by H.P. Moon

Indovoluta, A New Eocene Volutid Genus by E.A. Eames 1 pl.

A Conchological Survey of the Genus Plecotrema (Gastropoda-Elobiidae) by Bengt Hubendick. pp 110-126 and 5 figs., maps.

It is always a pleasure to read such a paper as this one whether particularly interested in the group or not. In the first place the author has considered the genus as a whole not leaving the reader in doubt as to the relationships with other faunas. The author finds one species in the West Indies, all others Indo-Pacific. A key to species is given, and the distinctions carefully noted. The first few lines of the author's introduction is worth quoting- "Formerly description of new species and "varieties" was one of the main subjects in the systematist's work. Today systematic studies of closely related species and geographical races are in the first place in an approach to evolutionary problems."

Distinctions Between Anisus (Armiger) crista (L.) and Anisus (Gyr-aulus) riparius (West) by Nils Odhner. 1 anatomical text ill. and one photographic plate.

Basteria, Vol. 20, No. 4- 15-XII-1956. The following papers- A Synopsis of the Section Primigulella Pilsbry of Gulella Pfr. (Mollusca, Streptaxidae)- The paper is in English pp 65-77 by Bernard Verdcourt, and L.A.W.C. Venmans. 8 ill.

A New Fossil Natica from the Netherlands by L.P. Pouderoyen Pyrene scaldensis nova species, a hitherto misunderstood species from the Plio-Pleistocene of Western Europe by U.O. Van Regteren Altena.

De fossiele mollusken van de Nederlandse stranden en zeegarten by C.P. Van Regteren Altena, A. Bloklander en L.P. Pouderoyen.

Revision of the Melaniidae of British Guiana and Surinam by T. Pain pp 91-105 3 plates of species. Well written- should be of great value to those concerned with this province.

Notes on Loricata by P. Kaas This is a clear analysis of the systematics of certain Panamic species, and one new name.

Conchological Club Of Southern California

Meeting of Dec. 4, 1956

The Conchological Club of Southern California was called to order by the president, Mr. John Fitch after 7:30 P.M., Tuesday, Dec. 4th at the home of Mr. and Mrs. John Q. Burch, 4206 Halldale Ave., Los Angeles.

Under unfinished business the chairman of the nominating committee read the following report:

President- Dr. N.T. Mattox

Vice President- Dr. Homer King

Secretary- Mr. Bernard Altshuler

Treasurer- Mrs. Dorothy Brown

Slate of officers submitted by the committee- Mrs. John Q. Burch, Mr. George Kanakoff, Mrs. Mary Turber.

The chair announced that nominations from the floor were in order. Hearing none, Mrs. Burch moved the nominations be closed and a unanimous ballot cast for the nominees. It was so ordered.

The 1956 officers were thanked for their splendid work, and the new officers welcomed.

Next was planning for the field trip to Mexico, followed by a few reports after which the meeting was adjourned for a social evening of visiting, and the annual exchange of gifts.

The hostess was assisted by a committee who served refreshments furnished by members. More than 36 persons enjoyed the evening.

MINUTES OF THE CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

Jan. 8, 1957

The first meeting of 1957 was called to order at 7:45 P.M. by the president, Dr. N.T. Mattox. Dr. Mattox extended a New Year's greeting to the membership, and then introduced the other newly elected officers for 1957.

The minutes of the December meeting were read and approved.

A brief report on the recent San Felipe field trip was given by Mr. E.P. Chace. A great number of specimens were taken, good weather prevailed, and a fine time was had by all who were on the trip. Mr. Fitch, Mrs. Brown, and Mr. Chace thoughtfully brought specimens from Mexico for distribution to the members. Included were some alcoholic specimens of the brachiopod Glottidia palmeri.

The speaker of the evening, Mr. Chester Lindt, of the College of Medical Evangelists at Loma Linda, California, presented and narrated a film, "In Quest of Poisonous Fish". This film, prepared by the C.M.E. was a record of a fish-taking expedition to the Marshall Islands. The purpose of the expedition was to gather research material for a study of poisonous fish and the toxins involved. The film, which was in color, contained many unusual underwater shots. It was followed by a short question period.

Club hostess, Mrs. Rose Burch, introduced to the members the eleven guests who were in attendance.

Mr. Burch and Mr. Fitch informed the club of recent publications received by them during the past month.

The remainder of the evening was given over to a discussion of program arranging for 1957. These questions were raised: Should we rely on guest speakers, or should we enlist speakers from the club ranks? Should our program cater to the advanced worker or the novice? It was generally accepted that the preparation of a paper for presentation was a beneficial task well worth the time and work involved, and that a greater degree of participation from the membership should be encouraged. At a call for volunteers, however, there was a disappointing showing.

Mrs. Burch suggested that the program questionnaire, which was included with the January meeting notice, be completed and returned by each member.

The problem of programing for the coming year was left temporarily unsolved, and the meeting was adjourned at 9:50 P.M.

Respectfully submitted,
Bernard Altshuler, Secretary.

Hawaii, A Sunset Discovery Book \$1.50. This is the latest of this fine series of travel books and has just been received this week.

John Q. and Rose have been greatly interested in it because we have decided to take another vacation trip during the month of May and visit many of the places so beautifully described in this new book. We expect to have ample good company if the sale of this new book in our store is any criterion.

While filing a reprint on "The Determination of Sex" by Dr. Robert T. Hance, (Sci. Monthly, 1927), I had to smile at the following:-

"... the hypothesis proposed by Drelincourt in the eighteenth century and put forth together with a review of what he termed two hundred and sixty two "groundless hypotheses." As a subsequent writer pointed out, nothing was more certain that that Drelincourt's idea formed the two hundred and sixty third."

It is a bit beside the point of this paper, but the "groundless hypotheses" re variations in mollusks from sex would far exceed 363.

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MARCH 1957

CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

Editor- John Q. Burch,
1584 W. Vernon Ave.,
Los Angeles 62, Calif.

A CONCHOLOGICAL CONCLUSION

By J.Q.B.

If one is disposed to summarize his thoughts gleaned from the work of a host of authors a few things become apparent.

1. Conchology has accumulated a tremendous mass of data largely composed of observations of similarities between quite different mollusks each being described in terms of others.
2. No serious student is certain of his definition of a species.
3. A genus is a group of such species merely because some author has so stated.
4. No orderly arrangement of this information is possible from our present knowledge.
5. The evolutionary position of any mollusk is a matter of conjecture with several differing opinions available for most. One will often see references to a "chain" in evolution. By the use of a vivid imagination it is possible to construct such a "chain" bearing in mind that at best one will have but a few odd links of a very long chain. Nevertheless, the theory of evolution seems to be the most logical explanation, in spite of the fact that

almost all new discoveries seem to make the matter a bit more complicated instead of nearing a solution. The tree affairs we see drawn to show the various splits in the fossils is a good example. They are very interesting, but most of them have to have an occasional limb redrawn to accomodate newly discovered facts. Old trees are out of date.

6. Genetics- We recently sold an entire freight shipment of literature in this field. We have had enough literature on Drosophila (flies in case you are not familiar with them) to reach from here to wherever you may be. This last shipment cleaned the shelves for the moment, but it is a mystery how anyone can find something new to try out on these things. The results have been amazing. They made big ones, little ones, different colored ones etc. seemingly with no limit, BUT they still had Drosophila.

No one has been able to create a new species, only differing individuals of the same species.

Such musings may lead one to consider the basic issue between evolution and theology, a very dangerous thing to speak of, not to mention write about.

Unless you can imagine that creation simply started itself, we must assume that God made it in the beginning. Then we may consider three alternatives.

First- God did nothing more, and let nature take it's course.

Second- God rearranged life on the earth periodically.

Third- God controls everything all the time.

Here is a good place to strain a mental muscle in contemplation of infinity of time and space.

What is life ?

What is the cause of variation in animals ?

What causes inheritance, and the marvel of growth ?

When we know the answers to these, we can arrange our data with some certainty.

A Review by J.Q.B.

Animal Forms and Patterns by Adolf Portmann. This book was originally published in German under the title "Die Tiergestalt", and this English translation published in London, 1952 title "Animal Forms and Patterns". In stock \$4.50.

The author is professor in the University of Basel. This book should be of interest to students of morphology. While not denying the importance of present day research methods with their emphasis on microscopic or ultra-microscopic characteristics, the author feels that a great deal is missed by neglecting to pay proper attention to what is visible with the naked eye.

One chapter illustrated with numerous rather interesting figures is "The Mollusc and Its Shells".

The discussion of the relations between nervous systems, sense

sense organs etc., and the shell is well stated but possibly elementary for most of our readers here. However, the incorporation of the shell into the bilateral symmetry of the molluscan body in snails with anterior gills and other similar studies are well illustrated.

One page of illustrations shows the well known spiral structure of bivalve shells, but also discusses the lesser known fossil forms "Asymmetrical spirals in fossil bivalves: Diceras (Jurassic period), Requienia (Cretaceous period). In Requienia the asymmetry is increased to such an extent that the smaller (right-hand) shell almost occupies the position of an operculum. Speculation has sometimes even gone so far as to consider the operculum of snails to be a second shell; but this is incorrect."

****- If any collector finds this of interest, I have a box of specimens in stock of Exogyra arietina Roemer, Cretaceous, Del Rio Formation, Salado, Texas. \$1.00 each. A novice would almost certainly assume that this species is a gastropod with a heavy operculum instead of a pelecypod.

CAN BOOK SELLING BE A PROFESSION ?

By J.Q.B.

If not, some of us at least try to make it one. The Antiquarian Booksellers Association of America is part of the international organization, and maintains as rigid a code of ethics as any professional group. A violation means immediate expulsion. An applicant is required to have been dealing in books for years, and his record for integrity is no more carefully checked by any profession.

My election as president of the A.B.A.A., Southern California Chapter, for the year 1957, is a great honor. I thank my fellow dealers in antiquarian books, and promise to serve to the best of my ability.

Thirty seven years ago, February, 1920, I began my career as a dealer in books. This was immediately after my discharge from the Marine Corps following World War I, and from that day to this I have found the service of those who read scholarly books both profitable and pleasant. I sincerely thank them all, and pray that our associations may continue from my present sixty three to the end of my allotted time.

I am proud of the trust placed in my judgment by many readers throughout the years. This afternoon a professor of English of one of our local universities called, and surprised me by asking to see some books on parasitology, explaining that he had no foundation in this field and knew nothing of the subject. I showed him the proper stack and left him to browse. A short time later he called me with a book in his hand and asked my opinion. I took the book and replaced it telling him that the reviews on this book had without exception been critical. I suggested several others considered more scholarly. He thanked me. In this connection a book seller was judging the published efforts of a number of professional parasitologists, but certainly no one would think it necessary to be a parasitologist to have some ideas of relative merit. However, all books contribute something to our general fund of knowledge, and making a choice did not rob me of some admiration for the author. Too many persons take a high degree from their university and many years later their associates may be unkind enough to comment that the last thing they wrote was a check for the cap

and gown, and the last thing they read was the diploma.

I wonder how many authors would be shocked to learn that their cherished manuscript sent to a publisher had in turn been sent to certain booksellers for their opinion. It has been my duty to pass judgment on a number of them. My percentage has been fair. Some of those I recommended made the publisher a large return. I recall one though, a good many years ago, that I strongly supported. The president of the publishing company commented later that he doubted if they sold enough of them to pay for the ink.

One of the book trade journals some months ago carried a note from a school girl to the president of one of the largest publishers " My essay in school is on printing books, and I wish you would let me know as soon as possible just how you decide that a book will be a 'best seller'.? " Answer the girl and fill in a blank check from any publisher.

Who was it that said " Nothing is work unless you would rather be doing something else" ? By this definition I do very little work because I enjoy my daily association with fine books and fine shells.

Publications Received

Snails From California Caves by Allyn G. Smith Proc. Calif. Acad. Sci., Vol. XXIX, No.2, Jan. 28, 1957. pp 20-46, 2 pl.

This carefully prepared paper should be properly reviewed by a better qualified student of the land fauna. However, it is sufficiently impressive to consider that 38 different caves were explored. The proper name for cave explorers is a Speleologist. No matter what we do these days the occupation should end in ologist. I will lay odds that any member of the Stanford Grotto, National Speleological Society, ... Western Speleological Institute would be very properly fined were he to mention such a term as " cave explorer", nothing scientific about that.

Allyn Smith has added a number of new species to the western fauna, and one new genus Speleodiscoides.

The fauna of caves is very interesting seeming to produce blind fish and a lot of other oddities as well as cave snails.

Charles Johnson Maynard and his work in Malacology by Ruth D. Turner. Occas. Paps. on Mollusks, Harvard Univ., Vol. 2, No. 21, Jan., 1957.

This is an interesting account of rather an eccentric scholar. He named 220 species of the genus Cerion. The author here suggests that less than ten percent of these will remain as valid species.

*** I have forgotten the source but recall years ago acquiring a huge collection of Cerion including over 100 marked paratypes, and accompanied with the small printed journal or papers printed by Maynard himself. I am almost sure that we still have them. JQB

Zoological Record, Vol. 91, Sect. 9, 1954 Mollusca, Compiled by A.E. Salisbury, A.M.I.E.E. London, Published by the Zoological Society of London. Price Ten Shillings. Dec. 1956 102 pp.

The present editor, A.E. Salisbury is doing an excellent work. The Zoological Record is a necessity to the systematic specialist, and the only possible complaint may well be that this current issue covers the year 1954 leaving us obviously two years behind.

On Australia's Coral Ramparts by Paul A. Zahl, National Geographic, Jan., 1957. 48pp, 50 Ill., 41 in color. A beautiful issue. If you do not subscribe you should get this issue.

ELEMENTARY MOLLUSCAN SYSTEMATICS

By John Q. Burch

(An abstract of a paper given at the February meeting of the Long Beach Shell Club)

Orthodox English is accepted as our medium of communication, but the language of science may seem at times to approach a foreign tongue. Students of all branches have their own terminology, and hundreds of words and phrases have a particular meaning to them. Conchology is no exception.

A discussion of the morphological terms in general use would be elementary for the experienced students of this group. However, there are few of us who will not find an occasional review of fundamentals a stimulus to flagging memories. No further introduction is needed for a few words of advice to a beginner.

A study of glossaries is of first importance. This is analagous to the first day of school. The child who learns no more remains illiterate. A glossary is a first reader.

The glossaries in Dr. Myra Keen's Illustrated Keys are splendid. The glossaries prepared by Beatrice LaRue Burch and Thomas A. Burch, and published by the Conchological Club of Southern California are valuable.

When one has learned to read and write in conchology, and is no longer illiterate, the choice of the curriculum is broadened to the extent of offering some choice.

Two college students were in my store a few weeks ago, and informed me that their professor was disposed to ignore systematics and they were to devote all of their study to ecology. I commented that this would indeed simplify matters because they would then naturally study bats and birds together as one group, whales, seals, and fish together and many others.

I mention this to illustrate the absurdity of not considering the next step to be an attempt at some form of classification.

We must define one shell in terms of another. In as simple a structure as the gastropod shell there are too many features to be taken in and appreciated at a single glance, and when a number of gradational forms are viewed together it is seldom possible to retain any definite mental image in passing from one extreme to the other. True, it may be seen by the most casual inspection that they are closely allied, but to say how they are allied is by no means an easy matter.

The recognition of the proper genus to which to assign a shell marks the expert from the novice.

The ability to use keys is an important asset. The ease with which an experienced entomologist or other specialist familiarizes himself with conchology is surprising at times. They are accustomed to using keys based on characters.

There are a number of basic types of keys. Dr. Myra Keen in her Illustrated Keys to West North American Pelecypod Genera and the Gastropod Genera, used a dichotomous system. This is based on successive dual alternatives. Such a key is not always easy to use because the choice of the wrong one of the two will throw you far off the sequence. However, Dr. Keen's excellent illustrations make it a simple matter to check your progress and correct such an error.

In the absence of such illustrations I have found it much easier to follow the more common system of keying out a group by the use of a succession of recognizable characters. A few examples of such keys are on the table for the examination of those interested. Some of these represent the work of A.M. Strong, Dr. W.H. Dall, Dr. Paul Bartsch, Dr. Leo Hertlein and others including a few of my own.

Many advanced students find it valuable to attempt to make a key of their own covering any group of shells with which they are working. It is usually possible to make two or several keys of the same species using different characters or combinations. And when it seems to be simply impossible to key out a species, it is an excellent idea to consider the obvious fact that you are probably in error by having it in this group at all. Of course, when every key you think of runs two of your named shells together, then you have something else to study carefully. The two may be variations of the same entity.

It may be confusing to attempt to demonstrate the use of a key without each of you having a copy before you. However, I think it as well to illustrate by actually placing a few specimens in the proper genus by the use of this key- Dr. Keen's West North American Pelecypod Genera and Gastropod Genera.

We have here a specimen of a pelecypod with a limpet attached.

By following the pelecypod key note that we make a choice of one of two alternatives through 6 steps to arrive at the genus Pecten, No. 19.

We will now take the limpet and turn to the gastropod key. Here we make a choice 9 times before arriving at Capulus, No. 20.

We now refer to the mimeographed Minutes of the Conchological Club and from the two keys to species, we find in 3 steps for one and 5 for the other, that our specimen is Pecten diegensis Dall with a specimen of Capulus californicus Dall attached.

It might interest you to observe the plan used by Dr. Axel Olsson in his Key to Subgenera of Olivella on Shell Characters. While checking my specimens with this key I found that I had one set of specimens incorrectly classified and happily corrected the assignment.

Please observe the ease with which you key these shells to the subgenera Lamprodoma (contains our well known West Mexican species Olivella volutella (Lamarck), and Zanoetella (contains Olivella zanoeta (Duclos). Be assured that these two may be consistently and easily separated. Nevertheless, the superficial resemblance is so great that many otherwise careful students might confuse them without taking the time to observe the distinguishing characters so clearly set out in this key.

All instruction and advice is futile if it does not arouse the interest of the beginner to the extent of attempting to do his own research. I recall the story of a father who wrote the president of a great university complaining that the tuition for his son seemed very high, because his son rarely met a member of the faculty but spent almost all of his time between his laboratory and the university library. The father was congratulated by the university president because his son had completed his education adding that all that any university can hope to do is to train a student to the point where he will be capable of carrying on by himself.

The late George Willett was one of my mentors when I was a beginner. He insisted that I name all of my own specimens. He would then ask me "John! Why do you label this specimen as you have? Why is it not another allied species? etc."

As his student you could not escape by merely looking at the pictures. You had to read the description, and study it line for line against the shell in hand.

To ask a museum curator or some advanced student to name a shell for you, then place it in your collection without knowing why it was so classified, is to my mind analagous to using a pony exclusively to read Cicero or Virgil.

NEW PUBLICATIONS

Santos, Eurico Os Moluscos (Vida E Costumes) Rio De Janeiro, 1955. 135 pp ,51 text figs. and several plates, two in color. Binding is in boards, not cloth. In stock \$5.00 John Q. Burch

This is a work entirely in the Portuguese language and is obviously an introductory text for the students of mollusks of Brazil. The work is of interest, but the percentage of the species known from Brazil is small. I would hesitate to recommend it for use in classifying a sizable collection from that fauna. The more common species are discussed.

Emerson, William K. Pleistocene Invertebrates From Punta China, Baja California, Mexico. With Remarks on the Composition of the Pacific Coast Quaternary Faunas. Bulletin of the American Museum of Natural History, Vol. III: Article 4, 1956. pp 313-342, 1 text fig., 2 plates, 2 tables.

This is an interesting and scholarly study of a section of the outer coast south of Ensenada with an association of both warm and cold water species. The conclusions of the author seem well reasoned, but it is obvious that all deductions regarding the climate of the past are necessarily somewhat speculative.

Parker, Robert H. and Curray, Joseph R. Fauna and Bathymetry of Banks on Continental Shelf, Northwest Gulf of Mexico. Bull. Am. Ass. of Pet. Geol. Vol. 40, No. 10, Oct., 1956. 13pp 6 fig., 1 pl.

This is a study of the bathymetry of a number of calcareous banks with observations on the subspecific variations of certain species from the normal or better known intertidal specimens of the West Indies.

Baird, R.H. and F.A. Gibson Underwater Observations on Escallop (Pecten maximus L.) Beds. J. mar. biol. Ass. U.K. ,1956. - The lack of escape reaction is surprising compared to the active P. diegensis.

Minutes 166, March, 1957

MINUTES OF THE CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

Feb., 1957

Dr. Mattox called the meeting to order at 7:45 P.M. The minutes of the previous meeting were read and approved. Treasurer, Mrs. Dorothy Brown, reported a paid membership of forty-six, and a cash balance of \$33.74.

Dr. King, program chairman, presented a tentative schedule of events for 1957. There are still some vacancies, and any member who can give an original paper or an appropriate report is urged to volunteer.

Miss Bessie Falooner reminded us that the organization had at one time endeavored to accumulate a collection of California shells. It was moved that we once more undertake this project.

Dr. Mattox rounded out the roster of club officials by appointing John Fitch, field-trip chairman, and Miss Falconer, hostess.

After the business portion of the meeting was concluded, two talks were given. Dr. King spoke on the causes of tides. He gave us a brief history of man's knowledge of tides, an explanation of the factors involved in producing this phenomenon, plus a listing of places where unusual tides occur. Dr. King's talk was documented by a film, "The Moon", and by printed matter that was distributed to the members.

Rose Burch gave a short talk on collecting molluscs under different tidal conditions. She gave us a short resume of the various species that would most likely be found in the different littoral zones. A film, "The Seashore", illustrated these zones.

The membership was requested to contribute shells, in any condition, to the Cabrillo Beach Museum. Mr. John Olquin, Director of the Museum, informed us that these shells are to be scattered on the beach so that blind children may experience the pleasure of finding them.

The meeting was adjourned at 9:45 P.M.

Respectfully submitted,
Bernard Altshuler, Secretary

NOTICE

The American Malacological Union Pacific Division will meet

in Santa Barbara, Calif. May 30-31, June 1

All members will be notified by the secretary regarding the hotel and place of meeting.

A Dissenting View on Fasciolaria distans Lamarck

by John Q. Burch

No disrespect for the serious work of Mr. S.C. Hollister is intended, but there may be other thoughts concerning the first paper in the current Nautilus "On the Status of Fasciolaria distans Lamarck".

Is Fasciolaria distans Lamarck, 1822 to be replaced by Pyrula Hunteria Perry, 1811 ?

With his customary scientific inaccuracy Perry figured a specimen in gaudy unnatural colors (blue inside and out), stating that it came from Australia (New Holland), and named for the governor of the colony. Now on the supposition that Perry make a still worse blunder, and in reality had a specimen from Campeche, Guld of Mexico a slight error of some 12,000 miles and two oceans, we are asked to discard 136 years of conchology, and use this fantastic guess at the shell Perry had instead of Lamarck's scholarly description of which the type is still extant. To be true no one has recognized such a shell from Australia since Perry colored his book, no doubt for the best of reasons. No diving shell from anywhere could be classified from the figure or the description. Sowerby stated in the zoological Journal as early as 1825 that in his opinion Perry's work was too vaguely defined for serious consideration. The result of the work of the Sowerbys and other scholars contemporary with Perry was to bury Perry's puzzles with all proper ceremony. Please pardon me for siding with Sowerby at all.

Now let us hope you have a vivid imagination for this one, Fisher von Waldheim, 1807, Mus. Demidoff Catalogue, Tom 3, gives a 3 line mention in French, gives no figure of any kind, but followed the policy of several others of merely referring to a figure in one of the old pre-Linnean works. In this case L. stat. 910. Now from my copies of Lister I am disposed to think Lister figured another puzzle or perhaps a fossil. This catalogue reference though would if accepted have priority over Lamarck, or Perry either for that matter. He called it Fasciolaria lilium.

The Basic for My Comments

It is my good fortune to have all of the books mentioned in my library and before me at this moment.

Secondly, I have handled many hundreds of specimens from the trawlers, as well as countless specimens from Florida, Cuba etc. I accepted Fasciolaria distans branhanae Rehder and Abbott as a recognizable race, and so labelled it in my personal collection. As for Fasciolaria lilium I propose to add it along with Perry's shell to the list of those classified under nomen dubium.

In conclusion, it is my considered opinion that the entire lot are variations of the same entity. It is suggested that a dog show or a cat show might offer a fertile field for research.

Until something much more convincing appears my specimens will continue to bear the name Fasciolaria distans Lamarck, 1822.

Muracypraea, New Subgenus of Cypraea by W.P. Woodring, Nautilus, v.70 p.88, The article is clearly stated and the reason for the new subgenus is obvious to all who have studied the species involved.

While it is beside the point of this paper it is surprising to note the number of references to Cypraea Mus Linne' from West Africa, all I feel certain in error. It is a Caribbean species.

MINUTES 167

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CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

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Please mail all news to your editor- John Q. Burch,
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Los Angeles 62, Calif.
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This issue will be largely taken up by the J.G. Cooper paper
for which we are indebted to Mr. Allyn G. Smith.

AMERICAN MALACOLOGICAL UNION- PACIFIC DIVISION

The Tenth Annual Meeting Will Be Held in Santa Barbara, Calif.
May 30, 31, and June 1 at the Mar Monte Hotel, E. Cabrillo Blvd.
The rates will be \$5.00 per person.

Wednesday evening- May 29 - A Reception at the hotel.

Thursday, May 30 9 to 11 A.M.- Registration
1 to 5 P.M. - Papers
8 P.M. film and slides-bring your own pet slides.

Friday, May. 31- All the forenoon Field Trips- Your choice of
Marine or Land Collecting, Visit to the Museum,
or a trip to the Botanic Garden.
1 P.M. Group Picture
1:30 P.M. Business Session
2 P.M. Presentation of papers
7 P.M. Banquet

Saturday- June 1 9 A.M. to 5 P.M. Presentation of Papers.

MANUSCRIPT BY J. G. COOPER, M.D.

by
Allyn G. Smith

In the main Library of the University of California is an unpublished manuscript by Dr. J. G. Cooper, Zoologist of the California Geological Survey, on the mollusca of the West Coast of the United States. It is filed as "Mss. FQL-417-C25" and came to the University as a gift of the Survey on December 24, 1889. The title page reads as follows:

"GEOLOGICAL SURVEY OF CALIFORNIA
J.D. WHITNEY, STATE GEOLOGIST
ZOOLOGY

Statistics of the

MOLLUSCA

1. Their localities on the West Coast of the United States.
- II. Chronological table of collectors and describers of species.
- III. Catalogue with Geographical table, Statistical and other notes.

By J. G. COOPER, M.D.

The foreward, or "Notice" reads as follows:

"The following papers are prepared from the material collected for the State Geological Survey, combined with the published results of their study by Mr. P.P. Carpenter and others as given in his 'Report on the present state of our Knowledge with regard to the Mollusca of the West Coast of North America' made to the British Association in 1857, and the Supplement thereto dated Aug. 1st 1864. The additions to these include about 130 species since described or determined, and the Catalogue is also extended so as to include all the land and fresh water species found west of the Rocky Mountains. The changes and corrections in localities, etc., are on the coast of California whose names are given towards the end of the chronological table, and other materials not at the command of Carpenter. I am especially indebted for valuable assistance to the notes and collections (mostly unpublished) of Dr. C.A. Canfield of Monterey, Dr. W. Newcomb of Oakland, Rev. J. Rowell, Mr. J. Hepburn and Mr. R.E.C. Stearna of San Francisco, Mr. W.M. Gabb, Prof. Brewer, Prof. Bolander and other members of the Geological Survey, the late T. Bridges and Mr. Voy. Mr. W.H. Dall of the Russo-American Telegraph Expedition, and Dr. G.H. Horn of the U.S. Army, who have been the most active and successful resident collectors and naturalists in this branch of zoology on the Pacific coast.

"With respect to foreign localities quoted, it will be

observed that very many of them are doubtful, but the authority is always given when known,. Those of Asia, New Zealand, etc., are especially doubtful, but have been so often given that they may indicate either a 'representative' group of species in those seas, or really identical forms which may have spread northeast across the northern Pacific by means of a current analogous to the 'GulfStream', which carries shells from the West Indies to Ireland, etc. Specimens received by Dr. Newcomb from Australia would seem to strengthen this theory."

The first* 15 numbered pages cover "Noted on Localities, Stations, etc., of Mollusca of the West Coast of the United States. These include San Diego, False Bay, San Pedro, Catalina Island, Clemente Island, Nicolas Island, Far ara Island, Cruz Island, Santa Barbara, The Santa Barbara Channel, San Luis Obispo, Monterey, Carmel Bay, Salinas River, Santa Cruz, Soquel, New Year Point, San Francisco Bay Ballenas (sic.) Bay, Farallone Islands, Cape Mendocino, Humboldt Bay, Crescent City, the Oregon Coast, Columbia River, Shoalwater Bay, Puget's Sound, Rosario Straits, Pellingham Bay, Neeah Bay, and Vancouver's Island. Comments are made on the general geography of each locality, marine conditions, approximate number of marine species found, etc. Separately for each Cooper also notes the principal terrestrial species and the approximate number of species.

Pages 149 to 213, inclusive cover discussion of the land species under the heading "Terrestrial Mollusca by W. Newcomb, M.D. and J.G. Cooper, the latter name having been added. Evidence is strong that Dr. Newcomb prepared this part of the Mss., for it is in a different handwriting than the rest, It contains many corrections and changes, in Cooper's handwriting. Freshwater shells were covered by Cooper.

Descriptions of species in the Mss. Are from published sources; no new ones are added. After each species the range is generally as then known with the name of the collector and the number of the label in the Survey Collection. Several of these numbers were checked with shells known to have been in the collection and found to tally, although in many instances a check is impossible as either the shells have been lost, or the old Survey labels destroyed and the shells renumbered by subsequent collection curators. Shells collected by Cooper and placed in the collection have the number of specimens, depth, and other data in the Mss. discussion. In many instances, also, a brief description of the color of the animal is included.

Toward the end of the Mss. is Part II, a large table entitled: "Chronology of the Names of California Molluscs, etc.", beginning with Cabrillo in 1542 and ending with Dr. G.H. Horn in 1865, including 102 separate items. Bound in with the Mss., at the end, is a copy of Cooper's Geographical Catalogue of 1867 containing many notes, additions and corrections in his handwriting. This is dated September 3, 1870.

*Now Known as Mission Bay

Most of the Mss. is on lined 'foolscap', 8"x 12-1/2" in size.

Also in the University of California Library is a smaller book containing several of Cooper's Mss. , consisting of reports of several expeditions he make, and other reports, to professor Whitney. It is catalogued as "Reports by Cooper - Mss. FQL-164-A3" The following items are included:

Report of the Expeditions to the islands off the Southern coast of California, by James G. Cooper, M.D.

Report on the general characters and products of portions of Southern California, By J. G. Cooper, M.D., Zoologist of the Survey.

Report on the Zoological Collections (by) J.G. Cooper, M.D.

Geographical Distribution. Northern Range of West Coast Birds in Alaska etc.

Reptiles/

None of these reports are particularly long, but some of them contain much information of historical interest.

March 1, 1940

TERRESTRIAL MOLLUSCA OF CALIFORNIA
by

W. Newcomb, Edited by J.G.Cooper

The following are selected notes from a manuscript by J.G. Cooper in a bound volume in the University of California Library (see file 'Mss.F.Q.L.-477-G25'). This manuscript was received by the Library from the California Geological Survey, December 24, 1889. The date of the Mss. is probably in the early 1870's. Marine molluscan notes are in Cooper's handwriting, with Mss. additions and corrections by Dr. Cooper. Notes on freshwater mollusca are in Cooper's handwriting.

Items copied from the Mss. are mainly habitat notes and other remarks thought to be of interest because of localities that are cited. Descriptions are omitted. (Copied March 1, 1940.)

Binneva notabilis J.G.C. (pp. 150,151)

"So far as discovered this species is limited to the bed of a ravine facing southeast about two hundred and fifty feet above the sea. During the wet season there may be a sufficiency of moisture, but for at least five months of the year it is not even damp at this locality. During this period the animal burrows under thick succulent roots, contracting to about twice the size of the shell, covers its body with a white mucous secretion which dries into a tough leathery case."

"Hab. Santa Barbara Island, Cal. 18 specimens obtained and

t three alive. No. 988."

Macrocyclus newberrvamm W.G. Binney (p. 152)

"Hab. San Diego Co. (Dr. Newberry), as far north as lat. 34 . Temescal Mts. (20 spec.) (prof. Brewer). Rare 20 miles east of San Diego, only one found."

Macrocyclus Sportella Gould

"Hap. "Oregon", (Expl. Exped.) Puget's Sound; Ft. Umpqua, Or. (Baird); Shasta Co., California (Voy). North of lat. 40. The specimens from which Dr. Gould described the species were not adult. With the exception of the lip and size of shell, his description applies accurately to our shells from shasta co."

"Messrs. W.G. Binney and Thos. Bland think this species but a variety of M. Vancouverensis. They are undoubtedly correct if we confine the comparison to the "smooth variety" found in this State distributed under the name of M. sportella, but probably a var. of M. Vancouverensis. No. 899."

Macrocyclus vancouverensis Lea (p. 153)

"A "var. Californica " is mentioned having "greatest diameter inch". No other comment on this. The Survey number of the species is No. 1093.

Macrocyclus voyana Newcomb (p. 155)

"Hab. near 'Canon Creek', a branch of the Klamath R., Thirty Co. About lat. 41 (Voy)."

"This species is so distant from the others of this group that it cannot easily be confounded with them when adult, and even the young shell differs in form from the young of the others when of the same size. It was found by Mr. Voy only at a high elevation in the coast mountains but he obtained over 20 specimens at that spot. "(Cooper)."

Hyalina Whitneyi Newcomb (p. 156)

"Hab. near Lake Tahoe, Cal., at an elevation of 6100ft. on Sierra Nevada; 3 spec."

"A flattened discoidal horny small species very simple in structure resembling H. striatella Anth." (Newcomb)

"Apparently confined to the eastern slope, and found with H. breweri, fulva, Vitrina, Pupa californica and Succinea, in a spring by a grove. No. 1112." (Cooper).

Hyalina breweri Newcomb

"Hab. Near Lake Tahoe, 8, (Dr. Cooper); Mts. of Northeast Cal. (Brewer); Mammoth Grove, Mariposa Co., (Master Willie Hillebrand This species may be compared to H. arborea Say from which it differs by its less elevation, more polished and lighter colored surface, and more open umbilicus. No. 1113," (Newcomb).

Discus duranti Newcomb

"Hab. Santa Barbara Island, lat. 33 30, about 24 found in a

single ravine." (Cooper). "This little species reminds one of an European fresh water shell, the Planorbis albus Muller, especially when examined from above. Beneath, the Whorls are not as distinctly shown as in the Planorbis." (Newcomb)?

Disous cronkhitei Newcomb

"Hab. Klamath Valley, Oregon (Gabb), lat. 40 ; shasta co., California (Voy); East of Sierra Nevada lat. 42 30. Approaches nearest in form to H. ruderata Anth. in smaller size, rib-like costae and almost channeled suture." (Newcomb, with changes by Cooper).

Conulus fulva Draparnaud

"Hab. Europe; Canada, Vermont, New York, Georgia, Texas, According to authors; near Lake Tahoe lat. 39 at 6100 ft. above the sea, east slope of Sierra Nevada. (Cooper). This rather curiously formed little shell has a range more extended than any other of our terrestrial species. Except in the circumstances that the specimens collected by Dr. Cooper near Lake Tahoe are somewhat larger in size than those from the Eastern United States and from Europe, no point of difference has been made out by a careful comparison of the specimens from distant points in so small a shell however a strong microscope might enable us to detect specific differences, not to be noticed by an ordinary lens or the naked eye. No. 1135." (Newcomb, with corrections by Cooper).

Family Helicidae

"The geographical distribution of Helices in California is very local and for most of the species the localities are but few and limited. The range hitherto assigned to many of them is not confirmed by recent explorations and probably originated from errors in labeling. The great dryness of the climate is the principal cause of their scarcity, and secondarily the absence of lime in certain districts. Commencing at the south a great range of arid deserts and mountains between the Colorado and the Sierra Nevada, from lat. 32 to 38 and from 100 to 300 miles wide has not furnished a single species, though Succineas occur along the Mojave River, a single species, though and Vitrina in Owen's Valley. West of the mountains we have H. tudiculata within the same range of latitude, but nowhere numerous; H. Kellettii abundant at San Diego and Catalina I.; five other species on that island and the three nearest to it, abundant, having moisture from the sea fogs and sufficient time. Going up the coast we successively find Macrocyclus Newberryana, H. traskii, H. Dupetit-Quarsii, exarata ramentosa Bridgesii, Nickliniana, Californiensis, Loricata Columbiana, infumata, fidelia and Townsendiana, WITH M. Vancouverensis, sportella and Vovana, all limited to the coast ranges, and especially their western slopes, near the sea. In the great interior valley none have been found on the bottom lands, the locality of H. Carpenteri being uncertain. On the west exposure of the Sierra Nevada Mountains they are exceedingly scarce. H. mormonum occurs rarely, except near lat. 40. I searched carefully in the most promising localities near its original habitat without finding even a single fragment. There is little

lime there and it may occur more plentifully on some limestone formation in the neighborhood. But after exploring half way to the summits of the Sierra, and 50 miles east of Sacramento, I succeeded in finding only one broken specimen, apparently of H. Tudiculata near Auburn, where there is considerable limestone. North of lat. 39 I have not collected but others have found plenty of dead H. mormonum only near lat. 41. Near the summits occur the minute Hyalinae, Disuss, Cornulus, Vitrina, Pupa, and Succinea, but still apparently limited to narrow localities. Others of these forms occur near the sea at San Francisco and one on Santa Barbara I. with the new genus Binneva."

"Near the Columbia, in the moist climate close to the sea, and on the Northern Rocky Mountains several species are very widely diffused, all distinct from ours except H. Townsendiana M. Vancouverensis and perhaps two Hyalinae." (Cooper).

___ Note: The above notes are in Cooper's handwriting. pages 163 and 164 that follow cover a discussion of the proper classification of the Helices in Newcomb's hand. Obviously these comments are so out of date as to be practically worthless now, so they were copied.

Helix arrosa Guld

"We notice the following varieties of this fine large species.

Var. a - Of a dark chestnut color but slightly marked with yellow striations.

Var. b - Pale yellow with a brown band.

Var. c - Entirely yellow with a greater elevation of the spire (perhaps diseased).

Var. d - Depressed, yellow, faintly banded."

"Hab. California, lat. 37 to 38, coast mountains. This species has a range near the coast from San Francisco, south to Santa Cruz, at which place it is quite numerous, indicating the center of its special province. It has been brought into the San Francisco market for sale as food, and judging from appearances must fully equal the Helix aspersa and perhaps Helix pomatia as an article of diet. These European species are highly esteemed for this purpose, the last named having been recommended as a diet for consumption. NO. 858." (Newcomb).

Helix exarata Pfeiffer

"Dimensions: high var. large diam. 1; small d. 0.80; axis 0.65 in.

Var. b, wide; " 1.10; " -- ; " 0.50

Var. c, Yellowish white, bandless. Large diam. 1; axis 0.40 inch.

Var. d, Form and striae normal, markings of H. Nickliniana

"Hab. West base of coast mts. near San Jose (Cooper); Santa Cruz (Rowell); New Year's ***** Pt. (Newcomb) all near lat. 37, the bandless var. perhaps diseased or imperfect.

"Variety d may be a hybrid of this species and H. Nickliniana, as both species are met with in the same locality, and in some

cases it is not easy to decided to which species the specimen should be referred. In the animal and in the shell they are clearly distinct from each other specifically. No. 920. "(Newcomb)?

Helix Avresiana Newcomb

Comments not important. (AGS)

Helis ramentosa Gould

"Dimensions; Large form, rare, yellowish, from San Pablo. Large diam. 1.30; small diam. 1; axis 0.65 inch.

Var. b - Large diam. 0.90; small diam. 0.75; axis 0.50

Var. c - " 0.70; " 0.57; " 0.35

Whorls 6, corneous. From Lafayette, near Mt. Diablo.

Var. d - bandless - equals H. anachoreta Binney - Humboldt Bay (Voy)."

"Hab. The first three varieties from about San Francisco Bay, near east and north shores; at San Jose Mission (Newcomb); Mare Island (Rowell); Geysers, Sonoma Co. Humboldt Bay (Voy). Lat. 37 30 to 41.

"Animal reddish gray, tentacles and base of foot bluish, quite narrow in proportion to the shell. Tentacles short." (Tompson, as reported by W.G. Binney, Page 79, Vo; / IV of Terr. Moll. under Helix Nickliniana Lea.) This description applies accurately to this species, not to Nickliniana. Having before me the original specimen from which Dr. Gould make his description of this species, there can be no doubt as to its proper identification. Upon very careful study and comparison of the type with the figure and description, given with the usual clearness and minuteness of detail, characteristic of the learned author of '(Nevitates', we are forced to the conclusion that reticulata pfr. (in that work) and ramentosa Gould are identical."

"It is undoubtedly this species that was collected near Bunica and reported in the Pacific Railroad Survey, as H. tudiculate Binney, a species not yet met with in any of the localities to which reference has been made for the species under consideration.

"The remarkable variety in size is worthy of note, although the form and finely granulated file-like structure of the attentive observer, or lead to a multiplication of species out of varieties. (These notes are in Coopers' Hand).

Helix anachoreta W.G. Binney

"Found by Mr. I.M. Thompson widely distributed in California but solitary. (W.G.B)

"Mr. Binney in his later works is convinced that this is merely a variety of Nickliniana. It resembles ramentosa and Bridgesii in having the umbilicus open, not covered as in Nickliniana. (Cooper). Some of the true Nickliniana as well as arrosa have been found without the band by late collectors. Mr. Voy has brought some bandless specimens from Humboldt Bay which have the sculpture of H. ramentosa, together with some that are banded. It is not unlikely that each of the banded species may occasionally be found bandless. (These

notes in Newcomb's hand.)

Helix Bridgesii Newcomb

"Hab. San Pablo, Contra Costa Co; I cannot make Pfeiffer's figure and description of reticulata agree with this. The figure figures given with three views in 'Novitates', has the umbilicus open like ramentosa but in description he says 'umbilicus angustus non pervius' which led me to separate, Bridgesii and Ayresiana from it, not having the 'Novitates' at the time I described it. The differences consist in the much more elevated form, more rounded volutions, additional whorl, and less oblique aperture of Bridgesii. In other works, it is Nickliniana in form, ramentosa in sculpture and umbilicus, but the umbilicus less open,

"Pfeiffer may have had for his first description a hybrid of ramentosa and Nickliniana. (See next species)." (These notes by Newcomb).

Helix nickliniana Lea

"Dimensions: high var.; Large diam. 1.05; small d. 0.95; axis 0.80 inch.

Var. b, lower; " L ; " 0.85; " 0.60 inch.

Var. c, small, sculptured; large d. 0.70; small d. 0.57; axis 0.45 inch.

Var. d. hybrid of arrosa? Large d. 1.20; umbilicus open.

Var. e, bandless, lip broad, whorls less rounded, this, smooth. Perhaps a diseased or imperfect form

Var. f. form typical, sculpture like ramentosa, probably hybrids, like reticulate Pfr., in first description, and redimita W.G. Binney."

"Hab. Near San Francisco Bay, Lat. 37 to 38 20, common." (Notes by Newcomb)

Helix redimita W.G. Binney

"It seems merely a variety of H. Nickliniana the difference consisting only in the sculpture which is very finely scaly, resembling in this respect H. ramentosa. I have raised six of them from true Nickliniana but the umbilicus is open, and may be hybrids, the typical ramentosa being too distinct for us to unite them all as one species. No. 1168." (Notes by Newcomb).

Helix Californiensis Lea

No notes worth coping (AGS)

Helix tudiculata Binney

"Hab. Foothills of the Sierra Nevada from San Diego to Auburn, Lat. 33 30 to 39. (Cooper). Not found near S.E. Bay, (or north?) This is one of the finest species of California, well characterized by the form of the shell and the indentations or cicatrices covering the whole surface, which in the small variety however are scarcely noticed. It has been credited to the Columbia River,

but probably by error. No. 1786." (Note by Newcomb)

Helix crebri-striata Newcomb 1864

(H. intercis W.G.B. 1857 in synonymy)

Long comment by Cooper on intercisa from "Oregon" vs. crebri strata from San Clemente Island finally concludes that Binney's name should be adopted. Cooper says it is "moderately abundant on San Clemente Island, a basaltic formation with little alluvium or lime on it". (AGS)

Helix intercis W.G.Binney

No comments of interest except that Cooper thinks crebris-trata is the same as indicated in his notes on that species. (AGS)

Helix fidelis Gray

"Hab. Near the coast north of lat. 40. Humboldt Bay and Crescent City, Cal.; also small var. on mountains eastward to Mt. Shasta (Prof. Brewer); Vancouver I. (Mr. Gabb)."

"The Crescent City specimens is of the largest size and that from Mt. Shasta very small, resembling H. dupetithouarsi."

"This fine large species varies considerably in colors and markings; before me are the following varieties:

1st - deep chestnut, almost black, without trace of bands lip light purple.

2nd - deep chestnut with a central reddish yellow band.

3rd - Same general colour with a second narrow band above colours deeper in patches.

4th - bright buff with a central black band continued above the suture, base dark chestnut.

5th - light buff, broad black central band with two light chestnut partially interrupted bands above, and a pale broad irregular one below; base buff color, lip white. This last named variety is from Chescent City.

Almost endless intermediate varieties might be noted but the form, size and aspect of the shell are sufficiently constant to prevent error in determining the species." (Newcomb)

"A small variety found by Prof. Brewer near Mt. Shasta much resembles H. dupetithouarsi and may have been previously mistaken for it. No. 1135." (Cooper)

Helix dupetithouarsi Deshayes

"Hab. Cypress Point, Monterey, lat. 36 30 ; Dupetithouars; Bridges; Cooper.

"It is believed that the range of this species is extremly limited as it has not been found to our knowledge in any other locality. It has sometimes been confounded with a small variety, of H. fidelis and ascribed to Oregon, the actual province

of this species". (Newcomb)

"Lea's 'Oregonensis' may be a varl of fidelis. Specimens of H. Mormonum, which occupeis a range of latitude intermediate between this and fidelis may have been mistaken for it, while others received by Mr. Binney from 'Tulare Valley and San Diego were probably H. traskii. It is certainly not 'widely diffused through California' nor found in Washington Terr.'" (Cooper)

Helix traskii Newcomb

This species makes a near approach to H. Dupetitthouarsi especially after the animal has been removed from the shell. In a fresh state the animal shows through the shell, presenting quite a different aspect from that with which it is most nearly allied. In addition to the differences referred to in the description, the shell of H. traskii has a greenish shade of color which is lost in keeping it long. No. 863." (Newcomb)

"These two species continue the series of highly colored and polished species south to lat. 34. ." (Cooper)

Helix mormonum Pfeiffer

"Hab. The type from 'Mormon Island' in the South Fork of the American River, about lat. 38 40, 100 miles from the sea." (Newcomb)

"The variety, from Sonora, lat. 38 (Frick), and Shasta Co., near lat. 41 (Voy, Brewer, Newcomb). An immature shell from San Joaquin Vally collected by Mr. Gabb south of lat. 38 is much larger and more turgid, but probably of the same species, which is not found west of the Coast Mts. A shell from the east side of Mt. Diablo, somewhat scorched, found by Prof. Brewer, is perhaps a variety but has much the appearance of a flattened H. Traskii, and has the band higher then any other of the group. Those from the north may have been mistaken for H. Dupetitthouarsi (Cooper)

Helix rufo-6incta Newcomb

"Hab. island of Sabta Catalina, 19, and San Diego, 1, (Cooper) lat. 32 30 to 33 30. Found torpid under stones in June, near North end of Island only. No. 624." (Newcomb)

"Extremes of variation in dimensions:

Var. <u>a</u> - Large - Large d. d.	0.70; axix	0.45 inch.
Var. <u>b</u> - Small - "	0.48; "	0.40; 0.25 in.
Var. <u>c</u> - high - "	0.70;	0.62; 0.40 "

The small from of which only four dead specimens were found resembles H. Gabbii and may possibly be||a large form of that species." (Cooper)

Helix Tryoni Newcomb

"Hab. Aboundant on Islands of Santa Barbara and San Niclas, near lat. 33 30 . (Cooper). Over 150 collected, mostly alive, though aestivating in May and many sticking on shrube. NO.1098.

Note: Pages 186-188 contain a long discussion, signed "J.G.Cooper" commenting on the origin and geographical range of the Island species. Fossils are mentioned, particularly from San Nicolas, of which he says in the last paragraph: "I obtained two broken specimens of another fossil species on that island, apparently undescribed but too imperfect for description. They differ from any other in California, being nearly discoid, their mouth with a thick lip forming a perfect circle and their diameter about 0.50 inch." (AGS)

Helix Carpentieri Newcomb

"Hab. Tulare Valley, California. specimens yet known. Its range seems to be south of lat. 36 and very limited.

"This species claims near affinity with no other known on the west Coast excepting H. Rowelli Newcomb., recently described, from which it may be readily known by its wide umbilicus, large size, greater solidity and roundly conical form. The type specimen on its passage to Washington to be figured was unfortunately lost by the burning of the steamer Golden Gate. A specimen remains however in the Natural History Society Collection of San Francisco, and a broken one found by Mr. Gabb, in the State Coll. No. 1136." (Newcomb)

Helix Kelletti Forbes

"No. 865" (Newcomb)

"The form is quite variable, some being very much expanded near the mouth like H. tudiculata, others nearer to the form of H. Irvoni, its nearer ally.

"This fine species appears to be limited to one small locality on the main land within this state, viz. The peninsula of 'Point Loma', $5\frac{1}{2}$ miles long, which forms the western shore of San Diego Bay, rising to the height of 422 feet and is connected with the lower plateau of the back country by a neck of marshy land a mile wide, separating the bay from 'False Bay' toward the north. According to Sebastants still remember when the two bays were united by a deep channel so that Pt. Loma was really an island, but the sand washed down by the San Diego River has filled it up completely besides changing the river bed, so that it now runs into San Diego Bay, instead of False Bay. Vizcaino also speaks of a forest of large and straight oaks three leagues long and half that wide, which then existed on or near the Point, but now there are only a few shrubby oaks there, and only a few trees within a circuit of twenty miles.

also

"Great changes must have occurred in the bottom of San Diego Bay during the 322 years that have passed since its discovery, though the depth of the channel has not altered between 1782 when Vancouver surveyed it, and 1858 when it was sounded by the U.S. Coast Survey.

"Apparently from these changes several marine shells found there by Hinds, Nuttall and others seem to have become extinct, and the great freshwater flood of 1861 2* exterminated others. Many common in the most recently elevated beaches no longer live there or anywhere within our limits. I refer to these facts to show that changes in the marine fauna are constantly occurring

*In another Mr., Cooper tells of being at San Diego during this flood. (AGS)
AND TAKING IT WITH THE PRECEDING STATEMENTS, TO SHOW THAT THE land form has also changed much, as it shown most clearly by the species of Helix, of which the shells remain a long time as evidence.

"At Point Loma H. Kellettii is now so nearly extinct that although immense numbers of the shells cover the ground on the west slope, I found only one alive during the five months residence there. They are also unhealthy probably from being too much exposed to the cold fog and sea-breezes, all, even the living shells, being bleached and chelky. I have found the same effect produced on H. Nickliniana in a similar exposure at New Year's Point, and in H. Townsendiana at cape Disappointment

"Other situations, a few miles northward, apparently quite as favorable, furnished none of this species, but a few of H. tuciculata.

"On Catalina Island very large and beautiful specimens, thinner and more expanded in the body whorl, with bands well marked, are found on the east side, near the north end of the island, others from the Isthmus, a narrow nick of land exposed to the sea breeze are smaller but well-colored, though none are so richly, arched as that figured by Reeve, which being small and perhaps from another region may yet prove distinct from the California type. It is strange that no collectors in Lower California have found this species; another argument for its not ranging to 'Central America'.

"If distinct, Gould's name 'Sandiegensis' may be used, if belonging to this species." (Cooper).

Helix Cabbii Newcomb

"Hab. San Clemente Island, lat. 33, very scarce, only two or three found and being dead shells the animal was not seen." (Cooper.) No. 1097.

"Makes the nearest approach to H. facta from which it differs in color of the shell and lip, somewhat smaller in size, the dussating (sic) striae, thinner shell, want of the white zones and more complete closure of the umbilicus." (Newcomb)

Helix facta Newcomb

"Hab. Santa Barbara and San Nicolas Is. near lat. 35-30

"This beautiful little species has a peculiarly tropical feature, the yellow color of the thick lip, being the only Californian species with this peculiarity.

"Myriads of them were found on Santa Barbara Is. mostly inactive by the end of May, their mouth being closed by a membrane.

They were more scarce on San Nicolas Is." (Newcomb).

"Immense numbers of this pretty little species live on Santa Barbara Is., where, with H. Tryoni they were torpid during my visit at the end of May, though scarcely covered by the dry herbage. They were found only on the southeast slope of the island, though many of H. Tryoni lived also on the other exposures, smaller in size. On San Nicolas Is. they were less numerous but similar.

"A fossil from abundant in the alluvium of S.B.I. is larger than those living, while the fossil H. Tryoni were smaller than their supposed descendants. As I found however no intermediate sizes to connect the larger fossil with H. facta, it may be considered a distinct species, and as such will be described by Mr. Gabb Among post-pliocene fossils. The present form does not seem to occur far below the surface.

"The dimensions of the fossil were:

Largest - large diam.	0.60;	small diam.	0.52;	axis	0.32
Highest -	"	0.54;	"	0.50;	" 0.32

"There is no species known on the mainland that would be suspected of being the original of either form, and they are apparently peculiar to the islands. One specimen of the fossil form from San Nicolas Is. has the appearance of a recent but dead shell." (Cooper).

Helix Hillebrandi Newcomb

"Hab. Sierra Nevada, Lat 36 to 38, west side (Voy, Gabb).
the

"The shell bears same relation to the small variety of H. mormonum or Traskii as H. infumata does to H. fidelis.
This species, described from a specimen that had shed its epidermis, as hirsute, has by the labors of Mr. Gabb been brought to our notice in its perfect state, establishing its character in this respect beyond a doubt. Its nearest associate is H. Dupetitfourasi from which it differs in its depressed form, carinate edge, form of aperture and hirsute pressed form, carinate edge, form of aperture and hirsute epidermis. No 1160."
(Notes by Newcomb, edited by Cooper).

Helix Townsendiana Lea

"Hab. Oregon and Wash. Terr. from lat 41 north; east to

Rocky Mts., lat. 47 (Cooper). Crescent City, Cal. (Newcomb).

Note: The Crescent City record is reproduced as written. Cooper mentions it in Am. Jour. Conch. 4, pt. 4, 1868, as having been collected there by Prof. Brewer "About 20 miles south of the Oregon line (Kelsey Haven), and Prof. Brewer did not find it anywhere inland, though he obtained H. fidelis on the Siskiyou Mountains". In the University of California collection at Berkeley is a lot labeled "Crescent City, Calif. D.O. Mills coll." Three from this lot are A.G.S. # 1897. They are typical townsendiana, (AGS).

Helix loricata Gould

"Hab. California, lat. 38 to 41 near coast. San Francisco in rotten stumps. (Cooper). Oakland, among willows, (Newcomb) Humboldt Bay (Voy). Sacramento River (Gould). Over 50 specimens."

"This makes an approach towards the peculiar dentate forms met with in the East. Dr. Gould compares it to H. inflecta Say, a shell much larger and heavier, with which it cannot possibly be confounded. No. 860." (Newcomb).

Helix devia Gould

"Hab. lat. 46 north. Puget sound (U.S. Expl. Exped.). Vancouver's Island (Lieut. Baskerville)." (Newcomb).

Helix Columbiana Lea

"Hab. Along the coast from lat. 37. to 50.

"This is probably one of the most widely distributed species of the western coast, the most so of any known with the exception perhaps of H. Vancouverensis Lea. The range, it will be seen, is from Nootka Sound to Santa Cruz.

"It affords many varieties for a plain shell without markings, which may be arranged under four principal heads, as follows;

Var. a Major; largest, with open umbilicus

Var. b Labiata; Large, with lip expanded

Var. c Clavata; large or medium, umbilicus closed, with or without an oblique tooth in the aperture

Var. d Dentata; small, not umbilicate or scarcely so, strongly dentate, the tooth reaching in cases from the junction of the inner lip nearly across the aperture." (Newcomb)

"It lives in the dampest localities, from the borders of marshes at sea-level to the summit of the Coast Range, 1500 feet elevation; among rotten stumps, etc.

"The small form only, with moderate lip and no tooth, seems to occur in middle California. The others may yet prove distinct." (Cooper).

Helix germana Gould

No remarks of interest. (AGS).

Helix cultellata Thompson

"Hab. 'Found plentifully in Contra Costa Co. ' by Mr. I.H. Thompson of New Bedford, Mass.

". . . This is one of the species not found by the Survey, although the precise locality in which it was obtained by Mr. Thompson is known and has been carefully searched over, no trace of the species has been met with. The inference that it is really an introduced European species can scarcely be avoided. It is well known that several species are esteemed as desirable articles of food, and considerable expense has been incurred in introducing edible species from various countries in Europe in order to propagate them in distant regions for this purpose.

"We may note the introduction of Helix pomata from the Continent into England, Helix lactea from Spain into Valparaíso, Helix aspersa from France into the Sandwich Islands where a few years since a hamper of this species was taken into one of the valleys by a French Whaling Captain and liberated.* We may also mention that the large Achatina variegata has been transferred to Brazil where it flourishes as well as in the moist jungles of tropical Africa, its native home.

"The near approach of the species under consideration to the well known Austrian Helix albanica leads us to the conclusion that some speculative lover of snails has made a futile attempt at domesticating this species on San Pablo Creek, expecting at some time so large an increase of stock, as to render him a valuable return for his time and expense. The failure to find any remains of this species may be due to the exhaustion of the original stock by the eager collector and author of the species." (Cooper)

"*This species was enumerated among the collections of Kellett and Wood at Santa Barbara before 1849, but was probably obtained at the Sandwich Is. by their naturalist Seemann"; (Note by Cooper).

Under the head of "Extra Limal Species" the following are listed, beginning with page 207:

Helix arbustorum Linn.
Helix areolata Sowerby
Helix veatchiana Newcomb (Unpublished)
Helix levis Pfr.
Helix pandorae Forbes
Helix strigosa Gould
Helix cooperi Binney
Helix peregrina Bosc.
Helix Sandiegensis "Lea" Gould
Helix rowelli Newcomb
Helix mullani Bland & Cooper

Helix polyorella Bland & Cooper
Rhodea Californica Pfr. (= Achatina Californica Reeve) Error

Pupa Californica Rowell

"Hab. Among willows, San Pablo Road, Oakland (Rowell).
 Coast mountains west of San Jose (Cooper). Found under
 bark and moss on trees. No. 829." (Newcomb).

P "It is possible that these two shells (are) nearly of the
 same species. From the few specimens of the first named
 which have been examined, the variation as given above
 holds so constant, as to warrant their separation; yet
 there may be found upon further research, connecting links
 that will establish them finally as but varieties of the
 same species. No. 828." (Looks like Newcomb's handwriting)
 (AGS).

Succinea oregonensis Lea

"Hab. lat. 38 north near coast. San Francisco (Rowell);
 Oregon (Nuttall)." (Newcomb).

Succinea rusticana Gould

"Hab. Lat. 39 north and east. San Francisco (Nuttall);
 to Rocky Mts. in lat. 47. 1 live (Cooper). Oregon (Expedition
 Shells). Coast range, Cal. (Newcomb). Warner's Valley,
 Or. (Gabb). Ocoya Creek (Lieut. Williamson)." (Newcomb)

Succinea Nuttalliana Lea

"Hab. lat. 39 north and east to Rocky Mts. Lewis' River,
 eastern Oregon (Nuttall); Clear lake, Cal. (Veatch);
 head of Crooked Creek, S.E. Oregon (Gabb)." (Newcomb).

Succinea -----

"Mojave River, undescribed/ (Cooper). No. 297." (Newcomb)

Cited as extralimital are:

Succinea Hawkinsi Baird
Succinea aperta Lea (= S. rotundata Gould from Id. of
 Oahu)
Succinea cingulate Forbes

Ariolimax Columbianus/

"Hab. Sta. Barbara lat 34 30' north, to lat. 49 near the
 coast. Color generally pale dull yellow, sometimes blotched
 with black, especially northward.

"A black species about 1.50 inch long is common near S.F.
 and probably other small ones in various parts of the State,
 yet undescribed." (Cooper).

FRESHWATER MOLLUSCA

Lymnaea stagnalis Linn.

"Rhett lake, Cal. (Dr. Newberry), also throughout North America, north of lat. 42. Europe and Asia (Binney)." (Cooper).

Lymnaea reflexa Muller

"San Francisco (Rowell)" (Cooper).

Lymnaea Proxima Lea

"San Francisco (Cooper)." (Cooper).

Lymnaea Traskii Tryon

"Mountain Lake (Dr. Trask)" (Cooper).

Lymnaea Pallida C.B. Adams

"San Francisco (J.Rowell)." (Cooper).

Lymnaea bulimoides Lea

"San Francisco (Rowell) '(Binney)." (Cooper).

Rest of list for Pompholyx, Physa, Planorbis, etc. are merely copeis of Binney, Tryon, Gould, and others for California localities. Special comments are as follows:

Physa Humerosa Gould

"Colorado River, rare at Fort Mojave. Not found by me near San Diego." (Cooper).

Planorbis opercularis Gould

"Near San Francisco, not rare. Also on Whitlys I., W.T., Sts. of Fuca, J.G.Cooper, Coll." (Cooper).

Gundlachia californica Rowell

"Marysville, Feather River, in clear stagnat ponds on water plants (Rowell)." (Cooper).

Copied March 1, 1940 by
Allyn G. Smith

Errors in typing the above paper-

Page 3 3rd paragraph- should read " Freshwater shells are covered by Cooper"

4th should read " the range is generally given"

Page 4- end of title should read " A.G. Smith, March 1, 1940, "

Page 7- Above Helix exarata Pfeiffer add Page 166 and

var. b last of line should read " axis 0.50"

Page 8 Above Helix ayresiana add Page 167

Above Helix anachorata add page 170

Page 9 Above first paragraph add page 171

third " " 172

fifth " " 172

sixth " " 174

Page 10 " first " " 176

" second " " 178

" third " " 179

" last " " 181

Page 11 " second " " 182

" third " " 183

" fourth " " 184

Page 12 " second " " 189

" third " " 190

Page 13 " seventh " " 194

" last " " 195

Page 14 Above Helix hildebrandi Newcomb, add Helix infumata Gould

" No comments of special interest, (A.G.S.) " Add page 195

Above last paragraph on p. 14 add page 199

Page 15- above second paragraph " " 200

fourth " " 201

fifth " " 202

Page 16 add top of page Page 205

Page 17 Insert following Rhodea californica Pfr...

Change Pupa californica Rowell to read Pupa rowelli Newcomb

Then following No. 829, Newcomb insert

" Pupa californica Rowell. Hab. near San Francisco (Rowell).

Near Lake Tahoe, with H. fulva etc. (Cooper). Found in

rotten stumps among sand hills, common." Page 210

Add following second paragraph " 211

" third " 212

" fourth " 211

" fifth " 212

THE ZETEK COLLECTION By J.Q.B.

Dr. James Zetek has devoted his life to the study of the fauna of the Panama Canal zone. His scholarly work is known to all serious students, and covers a period from 1906 to date. Dr. Zetek has reached the age of compulsory retirement, and we regret to add that his health is not good requiring the services of a nurse and other medical expenses not to be covered by retirement pay.

Dr. Zetek has offered to sell the large Zetek collection of shells. As merchants it would no doubt be a profitable matter, but as individuals sincerely interested in the progress of conchology, it seems little short of vandalism to break up such a collection. Therefore, we have refused to consider any commission of any nature if we are able to interest the right person to purchase this collection for one of our great institutions where the collection will remain intact and available for all of us to study when interested in Panamic species.

Throughout the years it has been our privilege to exchange occasionally with Dr. Zetek, and as might be expected the material was always in perfect condition with correct and accurate labels.

In the Zetek Collection there are 901 genera, 5,403 species and subspecies, representing 171 families, and represented by 35,359 specimens. Of these 5,403 species, 132 are invaluable co-types.

The Zetek duplicates represent 110 families, 281 genera, 738 species, in 1,842 lots, and in these there are from 9 to 210 specimens each.

It is impossible to present here a detailed list of the species involved. They are now housed in large wooden cabinets. It would require the services of a careful packer to prepare the collection for shipment by freight.

In conclusion, the collection has been appraised at not less than \$8,000.00 for resale retail commercially. However, Dr. Zetek states that for the right person, and to keep the famous Zetek collection intact, he will accept \$4,000.00, the buyer paying the packing and freight which should not be great.

Those interested my write direct to, Dr. James Zetek,
Drawer 3007,
Canal Zone.

Miss Viola Sterling Bristol, well known to all west coast collectors, died March 9, in the San Diego County Hospital, after a long illness. Miss Bristol became the assistant of the late Mrs. Kate Stephens back in the early twenties while Mrs. Stephens was curator of conchology, invertebrate paleontology, and marine invertebrates at the Natural History Museum in San Diego. When Mrs. Stephens resigned Miss Bristol succeeded to her position and was curator of the collections for a period of ten years or more, during which time the famous Lowe Collection, Dr. Fred Baker Collection and others came to her hands. Miss Bristol had a host of friends, but no surviving relatives.

A.M.U.P.D. Meeting in Santa Barbara-

Those wishing to take part in the program, or ask for other information may write:

Edward P. Baker,
11619 Downey Ave.,
Downey, Calif.

or Miss Ruth E. Coats,
1828½ S. Hill St.,
Oceanside, Calif.

Mr. and Mrs. Willard McHorter of Cincinnati, Ohio have written twice in recent weeks, and they certainly will be the envy of all shell collectors when they return. The last letter was largely about their shell experiences in Mauritius. An excerpt from this letter is an excellent sample "Jo and I were thrilled and delighted with Madagascar. We plan to return the season when it is possible to work the reefs- June 1 to Dec. 1, ... We like Nairbbi. It is a big and growing city, yet 5 miles west in the Game Reserve we drove overland 2 hours and took closeups of 11 lions. Our vacation is almost over. We have 2 weeks in the Belgian Congo, a week in the Azores, and are due back in Cincinnati, Aug. 9. ". They have been on this trip since last November.

Dr. Hans Schlesch, Sortso Strand, Stubbekobing, Denmark in his letter of Feb. 8 gave us some interesting news of many of our conchologists of Europe. We have all be concerned for the health of Dr. Schlesch and are pleased to hear that he is better and is planning - " Therefore, I think I will accept an invitation by Prof. Alex. V. Grossu, Bucarest in Romania, to visit in June, and on my return to stop in Budapest and meet my old friends there, Unfortunately the Zoological Museum in Budapest burned and was 70% destroyed including the very extensive and valuable malacological section, a tremendous loss for our international science."

Dr. Alan Solem , Chicago Natural History Museum , Chicago 5, Ill. is now the correct address and title. Dr. Solem earned his PhD from Michigan last year. He is now Assistant Curator of Lower Invertebrates at the Chicago Museum.

Mrs. Dorothy Brown, our club treasurer, returned from a two week collecting trip to San Felipe with some treasures including a beautiful 2 inch pur holden Oliya angulata Lam.

And while thinking of fine Oliya angulata Lam. Mrs. Jean Wilkins, one of our members from Downey, Calif. returned from a trip to the Gulf last December with a porcelain white albino.

Merklin and Nevesskaya are the authors of a book recently received. It is entirely in the Russian language, but the 32 plates of the specimens are excellent, and the Latin names make the work of value even though the reader may as in my case find himself completely illiterate in the language of the text. The work is on the key species of Miocene Bivalves of Turkmenia and Western Kazakhstan. A comparison of the specimens should be of interest.

Geographic Variation and Hybridization in Populations of Bahama Snails (Cerion) By Ernst Mayr and Carmela Berritto Rosen, American Museum Novitates, No. 1806, Dec. 7, 1956. 48 pages, 9 figures.

This is a scholarly study of the ecological population differences. Similar studies on other groups are needed.

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CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

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Please mail all news to your editor-John Q. Burch,
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It is a bit difficult for the editor of this paper to return to the daily struggle after having enjoyed the amazing hospitality of our friends in Hawaii. It seems that there can be no pleasure without pain. Even the bathroom scales suggest that something unpleasant should be done about that extra ten pounds of avoir⁹-dupois (seems to sound better than just ' fat'). This reminds me of one of the many things which caused us to marvel, and that is why the entire population of Hawaii are not fat. They serve so many delicious things to eat.

The thousands of fine shells seen will be discussed in due course.

We are pleased to have the interesting paper by Dr. G. Dallas Hanna for this issue. The next issue will be an index of the Minutes prepared by Mr. Allyn G. Smith. For this we are flattered and delighted.

COLLECTING SHELLS IN THE ARCTIC *

by

G. Dallas Hanna

The first indication of the problems involved in collecting shells in high latitudes was given by me by Dr. Wm. H. Dall before I left for Alaska on my initial trip in 1911. He told me of the general barrenness of all beaches and scarcity of species in intertidal zones. However, he said that on one of his many trips to the north he found one beach which was simply swarming with beautifully preserved specimens. Ordinarily if a stray shell is found it is usually so badly battered that it is worthless. Around the hook at the northeast cape of Munivak Island in Bering Sea he filled his collecting bag in a few minutes before he had to return aboard ship because of weather conditions. He asked me to try to get to the same spot sometime if I could, but an opportunity has not come.

His observations have proved to be very, very true according to my experience. Only once have I found beach collecting worth a stop. In 1954 very good museum material was found on the two low sand islands, Doctor and Dead Man, a few miles east of Point Barrow. Here we collected many things we afterwards collected in water over 100 feet deep. It is pure accident if one finds a shell worth preserving on a northern Beach.

There must be a good reason for this and the most likely one seems to be that the grinding and grounding of ice disturbs the bottom too much for permanent occupation by sedentary animals. At Point Barrow this disturbance extends out to a water depth of 70 to 100 feet, where a giant pressure ridge is normally formed by up-turned blocks. Inside this ridge not many bottom things are found, winter or summer. Outside there seems to be no unoccupied area greater than a few square inches. Competition for space must be a serious problem. This condition exists out to a depth of 300 feet which is as far as personal observations extend from dredging.

* These studies were aided by a contract between the Office of Naval Research, Department of the Navy, and the Arctic Institute of North America. Reproduction in whole or in part is permitted for any purpose of the United States Government.

Collecting in this open water zone in summer does not differ materially from methods used in more temperate climates. Dredges and trawls to suit the fancy of the individual can be used. The water is very cold. In summer it may rise to 7 degrees above freezing; in winter it is a degree or two below. Consequently certain precautions need to be taken to avoid too much wetting.

The first extensive bottom work at Point Barrow was done by the well known zoologist, Dr. George E. MacGinitie. His report has been published (MacGinitie, G. E. Distribution and Ecology of the Marine Invertebrates of Point Barrow, Alaska. Smithsonian Misc. Coll., vol. 128, no. 9, 201 pp. 4 pls. Nov. 30, 1955.) and it contains a vast amount of most useful information on the marine organisms, including mollusks, of this region. He described the methods he used in collecting, both winter and summer, in great detail. Some shells washed ashore during storms in the summers of 1949 and 1950 among great quantities of other groups of animals but these seem to have been exceptional seasons. At least one report (taxonomic) (Shoemaker, C.R. Amphipoda Collected at the Arctic Laboratory Office of Naval Research, Point Barrow, Alaska, by G. E. MacGinitie. Smithsonian Misc. Coll., vol. 128, no. 1, pp. 1-78, figs. 1-20, 1955.) on material he obtained has appeared. Mrs. MacGinitie has in preparation an extensive work on the mollusks which were obtained during his operations.

In favorable weather a considerable amount of work can be done from a dory, preferably equipped with an outboard motor. However, it is much more satisfactory to use a boat which is equipped with a winch and wire line so as to avoid having to handle wet cotton or manila rope. The Arctic Research Laboratory is usually provided with suitable gear.

One deviation from usual procedure with a small boat has been used successfully to a limited extent. There is nearly always a current of some strength everywhere in the Arctic Ocean. Either the boat or the dredge line can be fastened to a floating ice floe with a grapple and work can be done from the floe as a base. It affords a large clean open space for spreading out and sorting material as well as a substitute for an engine or oars. This method might be effective at the drifting stations far

out on the Arctic pack over deep water.

Shore fast ice picks up rocks of many kinds and after drifting loose in spring, scatters them indiscriminately over the ocean bottom. A dredge haul is seldom made which does not contain some of these erratics. The usual assortment of sands, muds and gravels is also picked up, depending upon the nature of the bottom. Animal life is extraordinarily abundant outside the grounding zone and most of the classes of invertebrates are represented. Among the mollusks, the Buccinidae are supreme off the Alaska Arctic coast. Many species and genera are present. The large sinistral Aulacofusus deformis is perhaps the most striking but there are others more handsomely sculptured. Trophon is well represented but the Naticidae are small and especially common. Sea urchins are common and sand dollars come up in the dredge occasionally. It is well known that there is more animal life in the cold Arctic waters per cubic meter or cubic mile than in temperate or tropical zones. That is, individuals are more abundant but there are fewer genera and species. The general absence of bright colors is one of the first observations a collector will make.

The fanciest colored shell I have seen is Pecten islandicus which runs from pale yellow to deep red. But the most abundant of the bivalves is "Saxicava" arctica, followed, perhaps, with Macoma, Mya, Astarte, Panomya, etc. Most of the myas belong to the form called truncata but others similar to japonica or arenaria are common. Many families so common in southern waters, such as the Ostreidae are absent. Mytilus edulis, however, and a Modiolus are present. The really characteristic group of the Arctic is Astarte. There are numerous species or variations of these heavy shelled mollusks and the taxonomy of them is somewhat confused.

Variation in many of the northern species of shells is very great and the taxonomist is often at a loss to determine species boundaries. This is especially true of the Buccinidae and some of the bivalves. The problems thus encountered will be faced continually until much more collecting and study shall have been made. There are gaps of thousands of miles of continental shelf where no collections have been made or at least the results have not been published. The Arctic Ocean is large and,

in spite of problems, it is a fascinating hunting ground for the zoologist.

Winter collecting of bottom dwelling organisms is limited to a large extent on the continental shelf to such as can be done through holes in the ice. The waters start freezing in late September and the ice gets progressively thicker until May. Dr. MacGinitie kept holes open throughout the winter and obtained many fine things. Sometimes he built an igloo of blocks of snow over a hole so as to make working conditions more comfortable. In our own case we have covered the holes with snow caps and braved the elements.

This method of collecting is limited to taking grab samples of bottom with such apparatus as an Ekman or Petersson dredge or one of the many kinds of core samplers. Traps have been more effective so far as mollusks are concerned but these limit the catch to such forms as may be attracted to bait. Thus many groups are excluded. Fyke traps made of screen wire, about 30" long and a foot in diameter have proved to be the most effective so far as our experience goes. Traps such as Frank Lyman (Shell Notes, vol. 1, no. 4, March, 1943.) described have brought up some excellent specimens but they tend to catch on the bottom edge of the ice and tip the contents out. Also in a swift current they have turned over sometimes.

The digging and maintaining of a hole through the ice involves considerable labor. No satisfactory substitute has been found for a good steel chisel sharpened on one edge and mounted on a piece of 3/4" pipe about 9 feet long. The chips are removed with a scoop made similar to those used by telephone linemen to set poles. The ice increases in thickness from about two feet in November to six feet or more in May. The holes freeze over between times of lifting traps from two to six inches in thickness but the removal of this presents no difficulty. The most serious problem is caused by the ice growing inward from the walls of the hole, thus reducing its diameter. All of this new ice must be removed before the trap can be brought to the surface. If the temperature is much below zero everything in the trap will freeze solid almost instantly. In some ways this is advantageous. Many organisms do not seem object to this treatment and resume normal activity when thawed out gradually.

There is no finer sorting surface known for the contents of a dredge or trap than wind-packed snow on Arctic ice.

Naturally a tow net can be lifted vertically through one of these holes in the ice and Dr. MacGinitie obtained many specimens of pelagic stages of mollusks in this manner. It seems from his report that pteropods were the most abundant as they are sometimes in summer.

Effective dredging as generally understood is difficult or impossible through stationary ice. Perhaps spar buoys could be planted in favorable places in fall with bottom connecting lines and when the ice freezes sufficiently holes might be made at the buoys. A dredge might then be attached to one end of a bottom line and pulled to an adjacent hole. The method sounds laborious and has apparently not been tried.

~~An~~ An ingenious method of net fishing through the ice has been developed by Canadians for use on large northern lakes. A hole of sufficient size is made in the ice so that an apparatus called a "Prairie Ice Jigger" can be shoved through. This is a system of levers built on a plank about 9 1/2" wide and 88" long. The levers are so arranged that a backward jerk on a line attached to them will cause the jigger to move forward along the underside of the ice. The line of travel is often followed by attaching a waterproof flashlight to the plank. When a sufficient distance has been reached, another hole is made, the jigger is removed and a gill net is stretched between the two holes. (For a detailed description of this device see: Sprules, William M., The Prairie Ice Jigger. Amer.Soc. Limnology and Oceanography, Special Publ. No. 20, pp. 1-10, 7 figs., Nov. 1949.) In some cases this method could be used effectively in Arctic marine collecting. However, in most places there would be some difficulty in following the course of the jigger through several feet of salt water ice. This is far from clear and transparent due to inclusions of tiny pockets of brine. The snow cover also would be a handicap. Nevertheless, the principles underlying the process need further investigation.

For some reason which is not clear, the removal of the soft parts of Arctic marine mollusks seems much more difficult than elsewhere. This is especially true of

the large gastropods. The usual procedure of boiling for a minute or two is not effective. The columellar muscle just refuses to let go. Better results have been obtained by immersion in one of the alcohols of usual preservative strength for about a day.

Little direct economic use is made of the mollusks of Arctic Alaska. Some Eskimos put out traps through the ice in spring for crabs and they catch a few of the large buccinoids occasionally. The meats of these are delicious, as good as any oyster or clam. Indirectly the mollusks are very important. They form the major part of the food of the walrus. These fine animals plow up the bottom with their huge tusks and sort out great quantities of bivalves. They seem to be expert in discriminating between living and dead shells and it has been estimated that they require more than 100 pounds of clam meats per day for each animal. Some of the sea birds consume large numbers of living shells. Apparently they have no difficulty in diving to depths of over 100 feet. There are many tens of thousands of eider ducks present in summer. Where they have rested on sand bars the evidence is very clear that large quantities of shells have been consumed.

Information regarding Alaska Arctic land and freshwater shells has been summarized recently. (Hanna, G. D., Land and Freshwater mollusks of the Arctic Slope, Alaska, Nautilus, vol. 70, no. 1, pp. 4-10, pl. 1, July, 1956.) The number of lakes is very great and there are a few wide spread species in many of them. Collections thus far made have been picked up incidental to work in other lines and systematic examination by an experienced shell collector would probably reveal additional species. Some of the lakes are deep enough so that they do not freeze to bottom but most of them are shallow. Even those which do freeze to bottom completely contain a few species.

Summer collecting can be done by any of the usual methods employed elsewhere except swimming and wading. The water is far too cold for this. Apparently all attempts to collect from the lakes in winter have been unsatisfactory. Working through a small hole in the ice with an apparatus similar to an Ekman dredge is not likely to produce results which would be considered representative.

Since there is no timber and no rocks in place on the Arctic Slope there are few species of land shells. The little black slug, Deroceras laeve (Müller) and Succinea strigata Pfeiffer, are the only ones which have been recorded with certainty. In other parts of Alaska several more species are found living among the grasses and mosses and thorough search may reveal some of them in the north. Obviously collecting land shells will necessarily be confined to the summer season.

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We are now meeting the first Tuesday of every month at 7:30 P.M.
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This issue is composed of an index to the more important papers
by authors published in the Minutes 1-140 Inclusive, 1941-1955,
being the first of three parts, the succeeding parts being detailed
to subject matter.

The work was prepared by Mr. Allyn G. Smith who has our most
sincere thanks.

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prepared by
Allyn G. Smith

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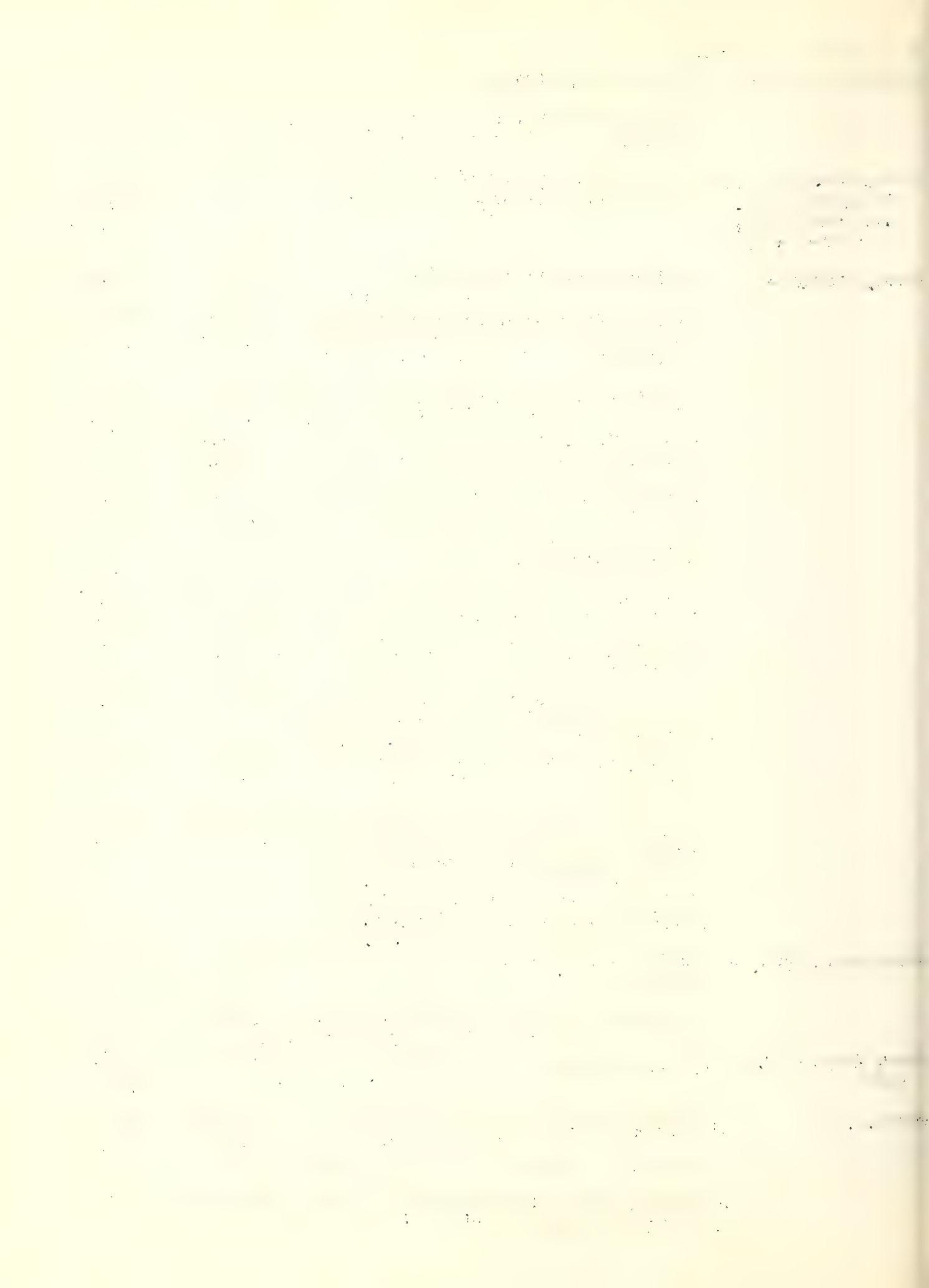
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2. The second part of the document focuses on the financial aspects of the organization. It provides a detailed breakdown of the budget, including income, expenses, and the resulting surplus or deficit. This section also discusses the various financial risks faced by the organization and the strategies implemented to mitigate them. The goal is to ensure that the organization remains financially sound and sustainable in the long term.

3. The third part of the document addresses the operational aspects of the organization. It describes the various processes and procedures that are in place to ensure the efficient and effective delivery of services. This section also discusses the various challenges faced by the organization and the strategies implemented to overcome them. The goal is to ensure that the organization is able to meet the needs of its stakeholders in a timely and cost-effective manner.

4. The fourth part of the document discusses the human resources of the organization. It provides a detailed overview of the various roles and responsibilities of the staff, as well as the various training and development programs that are in place. This section also discusses the various challenges faced by the organization in terms of recruitment, retention, and performance management. The goal is to ensure that the organization has a highly skilled and motivated workforce that is able to deliver high-quality services to its stakeholders.

5. The fifth part of the document discusses the legal and regulatory aspects of the organization. It provides a detailed overview of the various laws and regulations that apply to the organization, as well as the various steps that have been taken to ensure compliance. This section also discusses the various challenges faced by the organization in terms of legal and regulatory issues. The goal is to ensure that the organization is able to operate in a fully compliant and legal manner.

6. The sixth part of the document discusses the environmental and social aspects of the organization. It provides a detailed overview of the various environmental and social issues that the organization faces, as well as the various steps that have been taken to address them. This section also discusses the various challenges faced by the organization in terms of environmental and social issues. The goal is to ensure that the organization is able to operate in a sustainable and socially responsible manner.

7. The seventh part of the document discusses the future of the organization. It provides a detailed overview of the various opportunities and challenges that the organization faces in the future, as well as the various strategies that have been developed to address them. This section also discusses the various challenges faced by the organization in terms of future planning. The goal is to ensure that the organization is able to adapt to the changing environment and continue to deliver high-quality services to its stakeholders.

8. The eighth part of the document discusses the conclusion of the report. It summarizes the key findings of the report and provides a final overview of the organization's performance. This section also discusses the various challenges faced by the organization and the strategies implemented to overcome them. The goal is to ensure that the organization is able to continue to improve its performance and deliver high-quality services to its stakeholders.

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1. The first part of the report deals with the general situation of the country and the progress of the work during the year. It is divided into two main sections: the first section deals with the general situation of the country and the progress of the work during the year, and the second section deals with the specific results of the work.

2. The second part of the report deals with the specific results of the work. It is divided into three main sections: the first section deals with the results of the work in the field of agriculture, the second section deals with the results of the work in the field of industry, and the third section deals with the results of the work in the field of commerce.

3. The third part of the report deals with the financial results of the work. It is divided into two main sections: the first section deals with the income of the organization, and the second section deals with the expenditure of the organization.

4. The fourth part of the report deals with the administrative results of the work. It is divided into two main sections: the first section deals with the organization of the work, and the second section deals with the management of the work.

5. The fifth part of the report deals with the social results of the work. It is divided into two main sections: the first section deals with the social work of the organization, and the second section deals with the social results of the work.

6. The sixth part of the report deals with the future prospects of the work. It is divided into two main sections: the first section deals with the future prospects of the work in the field of agriculture, and the second section deals with the future prospects of the work in the field of industry and commerce.

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3. The third part of the document addresses the operational challenges faced by the organization. It identifies the key areas where improvements are needed and outlines the strategies being implemented to address these challenges. This section also discusses the role of the various departments in the organization and how they are working together to achieve the organization's goals.

4. The fourth part of the document discusses the human resources aspect of the organization. It provides an overview of the current workforce and the various initiatives being implemented to attract and retain top talent. This section also discusses the importance of employee development and how the organization is investing in training and development programs to ensure that its workforce is equipped with the skills and knowledge needed to succeed in the future.

5. The fifth part of the document discusses the environmental and social aspects of the organization. It provides an overview of the organization's environmental and social impact and outlines the strategies being implemented to reduce its carbon footprint and improve its social performance. This section also discusses the importance of stakeholder engagement and how the organization is working to build strong relationships with its various stakeholders.

6. The sixth part of the document discusses the overall performance of the organization. It provides a summary of the key achievements and challenges over the past year and outlines the strategies being implemented to improve performance in the future. This section also discusses the importance of continuous improvement and how the organization is working to ensure that it is always striving for excellence.

7. The seventh part of the document discusses the future of the organization. It provides an overview of the organization's vision and mission and outlines the strategies being implemented to achieve these goals. This section also discusses the importance of innovation and how the organization is working to foster a culture of innovation and creativity.

8. The eighth part of the document discusses the conclusion of the document. It summarizes the key findings and recommendations and outlines the next steps for the organization. This section also discusses the importance of ongoing communication and how the organization is working to ensure that all stakeholders are kept up-to-date on its progress.

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4. The fourth part of the document discusses the human resources of the organization. It provides an overview of the current staff levels and the skills and experience of the employees. This section also discusses the various initiatives being implemented to attract and retain top talent, including training and development programs.

5. The fifth part of the document discusses the legal and regulatory requirements that the organization must comply with. It provides an overview of the various laws and regulations that apply to the organization and outlines the steps being taken to ensure compliance. This section also discusses the role of the legal department in managing the organization's legal affairs.

6. The sixth part of the document discusses the environmental and social responsibilities of the organization. It provides an overview of the various initiatives being implemented to reduce the organization's carbon footprint and improve its social performance. This section also discusses the role of the various departments in managing the organization's environmental and social responsibilities.

7. The seventh part of the document discusses the future of the organization. It provides an overview of the various opportunities and challenges that the organization is facing and outlines the strategies being implemented to address these challenges. This section also discusses the role of the various departments in managing the organization's future.

8. The eighth part of the document discusses the conclusion of the report. It summarizes the key findings of the report and provides recommendations for the organization's future. This section also discusses the role of the various departments in implementing the recommendations.

9. The ninth part of the document discusses the appendix. It provides a detailed overview of the various data and information used in the report, including the financial statements, the operational data, and the human resources data. This section also discusses the role of the various departments in collecting and analyzing the data.

10. The tenth part of the document discusses the index. It provides a detailed overview of the various topics covered in the report, including the financial aspects, the operational challenges, the human resources, the legal and regulatory requirements, the environmental and social responsibilities, and the future of the organization. This section also discusses the role of the various departments in managing the organization's index.

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4. The fourth part of the document discusses the implications of the findings. It suggests that the results of the study have significant implications for the field of research and may lead to further developments in the future.

5. The fifth part of the document concludes the study. It summarizes the main findings and provides a final statement on the importance of the research.

6. The sixth part of the document includes a list of references to the sources used in the study. It also includes a list of figures and tables that are included in the document.

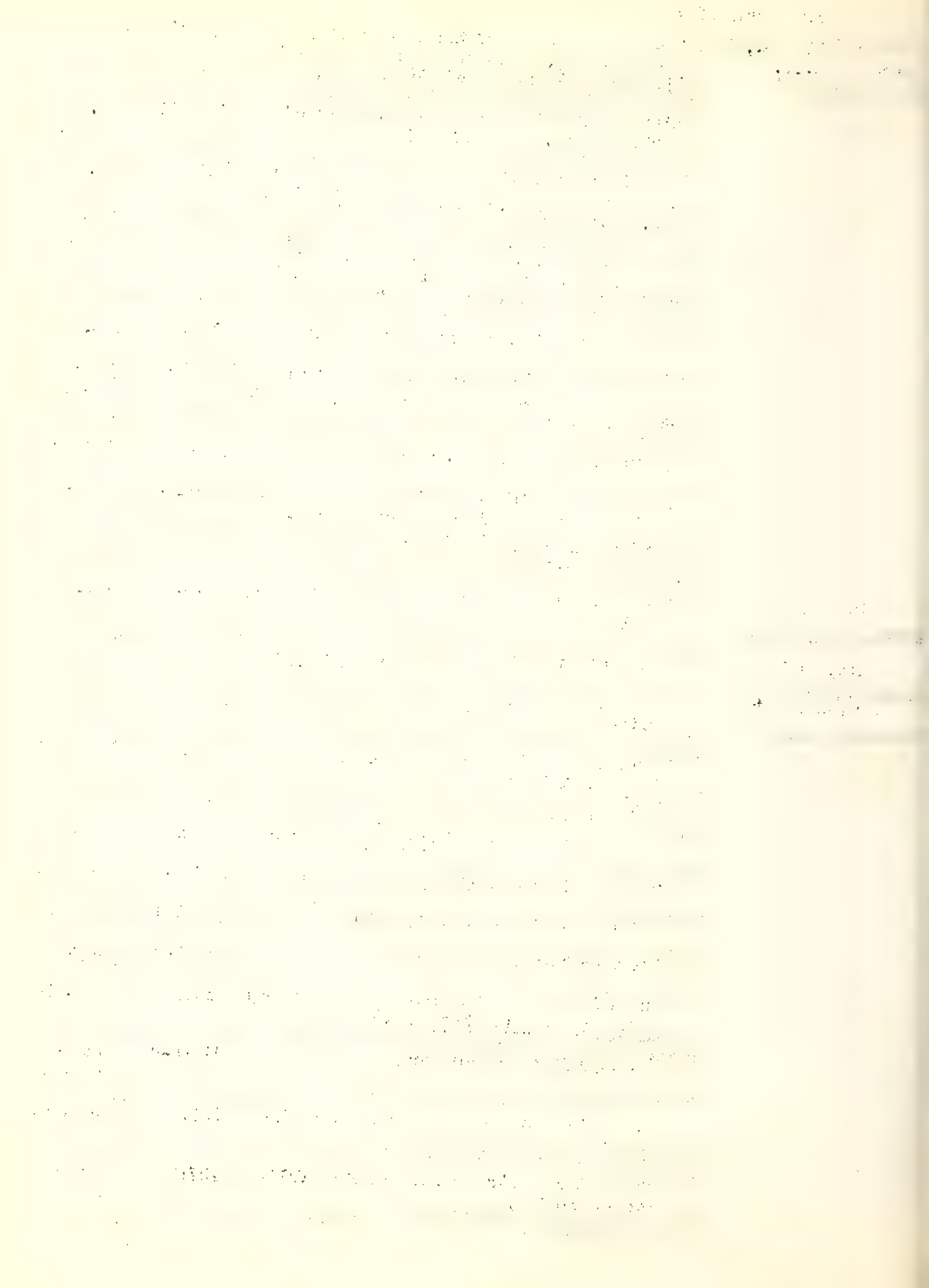
7. The seventh part of the document includes a list of appendices. These appendices provide additional information and data that are not included in the main body of the document.

8. The eighth part of the document includes a list of footnotes. These footnotes provide additional information and clarification on the content of the document.

9. The ninth part of the document includes a list of acknowledgments. These acknowledgments thank the individuals and organizations that provided support and assistance during the study.

10. The tenth part of the document includes a list of contact information. This information provides a way for others to reach out to the author for more information or to discuss the study further.

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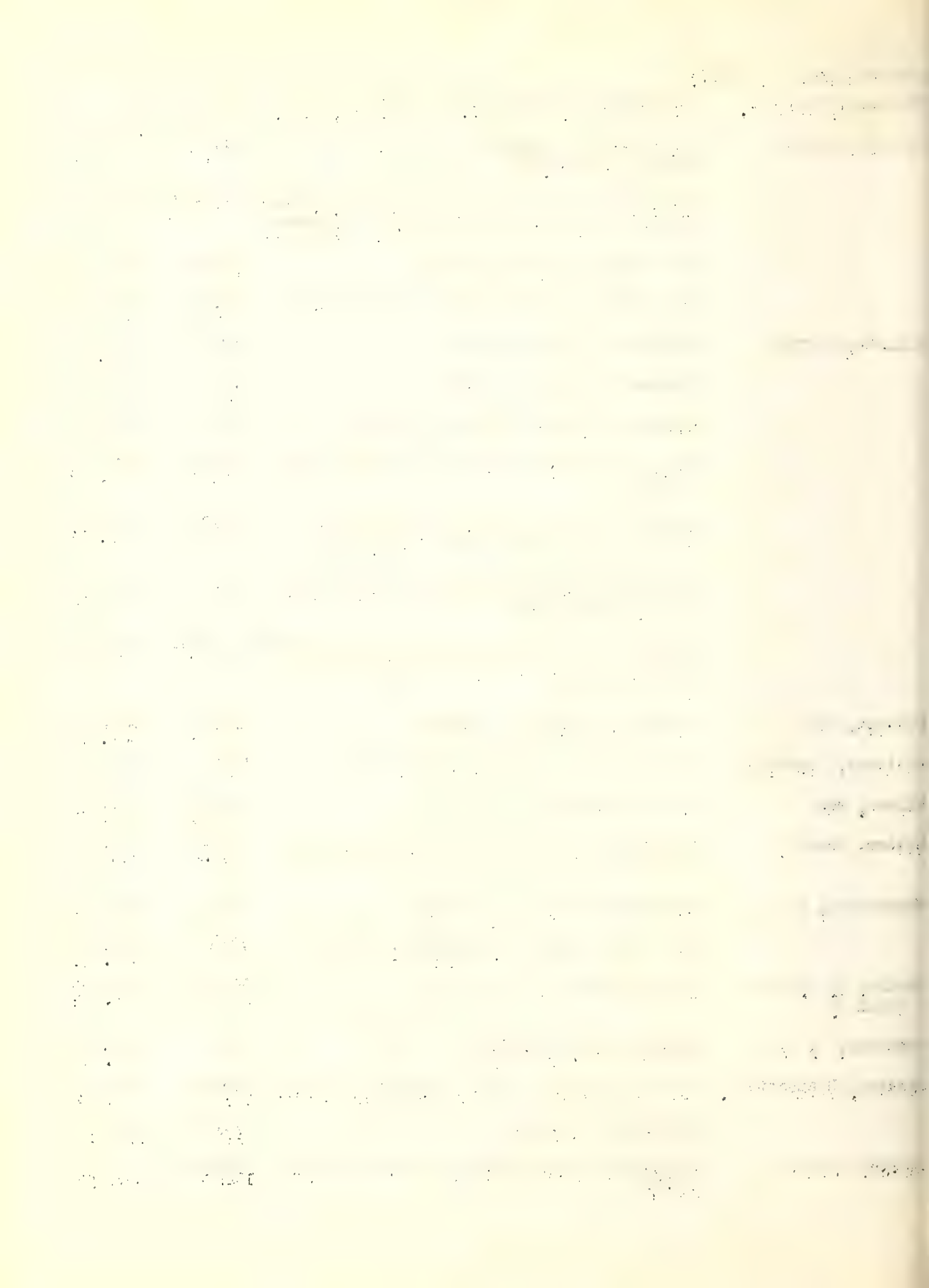
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CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

Subscription \$2.50 per year

We are now meeting the first Tuesday of every month at 7:30 P.M. at the Los Angeles County Museum, Exposition Park, Los Angeles, Calif. All interested persons are cordially invited.

Please mail all news to the editor- John Q. Burch,
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The 10th Annual Meeting of the Pacific Division of the American Malacological Union was held in the beautiful Mar Monte Hotel facing the beach at Santa Barbara, Calif. May 30-June 1, 1957.

Under the guidance of our chairman, Mr. E.P. Baker, and our secretary-treasurer, Miss Ruth Coats, the entire program was well handled and enjoyed by all.

Officers elected for the coming year are:

Chairman- Dr. Albert R. Mead of the University of Arizona

Vice-Chairman- Mr. John Fitch of the California Dept. of Fish and Game.

Secretary-Treasurer- Miss Ruth Coats of Oceanside and Palomar College.

The 1958 meeting is to be held in the northern part of the state.

American Malacological Union, Pacific Division-Group Photo, 1957
Santa Barbara, California

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2. Dr. Wm. K. Emerson
3. F.J. Dietz
4. Robert Drake
5. Harry Turver
6. John Strohbeen
7. Munto L. Walton
8. Howard L. Fletcher
9. Mrs. Howard L. Fletcher
10. Nelson Baker
11. Mrs. John Q. Burch
12. H.R. Turner
13. Robert Talmadge
14. Roscoe O. Stotter
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20. Mrs. Harry Turver
21. Mrs. Z.W. Craine
22. Mrs. Roscoe L. Stotter
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24. Andrew Sorensen
25. Roy L. Morrison
26. Dr. S.S. Berry
27. Dr. Albert S. Mead
28. E.P. Baker
29. Miss Ruth Coats
30. Mrs. E.P. Chace
31. Mrs. E.D. Baker
32. Mrs. Faye Howard
33. John Q. Burch
34. Mrs. Crawford Cate
35. George P. Kanakoff
36. E.P. Chace
37. Pat Milburn
38. Jack Bradbury
39. John Sibert
40. Crawford Cate



Program of the A.M.U.P.D. meeting in Santa Barbara, Calif. 1957

Wednesday Eve., May 29th- Reception

Thursday Morning- May 30th 9:00 to 11.00 A.M.-Registration

Thursday Afternoon- 1.00 to 5.00 P.M.- papers

S. Stillman Berry- " Is the Colorado River an efficient barrier to mollusk distribution."

Crawford Gate- " Notes on Cypraea"

Mrs. Nettie Macginitie- " Neptuneidae of Point Barrow".

Illustrated with slides, and an excellent paper with figures of the species was given to all present.

Mrs. E.P. Chace- " Notes on Panope globosa" Talk illustrated by specimens of this little known species followed by general discussion.

Frank C. Parkhurst- " Discrepancies in determining the age of fossils."

Robert Talmadge- " New Zealand Haliotis virginia" Illustrated with slides, and charts. This paper will be published in these Minutes later this year.

Thursday Eve., 8:00 P.M. Films and slides of many members present.

Friday Morning, May 31st.

Field trips, marine or land- or a trip through the Santa Barbara Museum of Natural History, and the Botanical Gardens.

** J.Q.B. spent the morning in the museum, and enjoyed the cordial talk of the curator Nelson Baker. The rather famous collection of Alonzo Yates is to be seen here.

Friday Afternoon- May 31st. 1:00 P.M. Group Picture

1:30 P.M. Business Session.

Albert R. Mead- " Diseases transmitted in terrestrial mollusks"

Mrs. Faye Howard- " Collecting at San Felipe, B.C.". Talk illustrated with slides, many specimens, and a 9 page paper presented to all present.

S. Stillman Berry- " Double-trouble in violet snails".

It would not be in order to discuss the findings of the author in detail here. However, the title of the paper is well taken. While the logic of the taxonomy seems to be very clear, the fact remains that while it is difficult to convince the scientific world that a species is in need of another name discarding the one it has borne for a century or more, it is "double trouble" indeed to switch names from one species to another after they have been established for well over a century in countless books.

George Kanakoff- " Some ancestral portraits of mollusks"

The author prepared a scholarly discussion of the very amazing new species from the deep dredgings of the Galathea Expedition- more of the popularly called 'living fossils'. The talk was beautifully illustrated with large carefully drawn charts showing the characters of the new animals. And in addition a 12 page paper was given to all present, the paper being an English statement of the paper " A New Living Deep Sea Mollusc of the Cambro-Devonian Class Monoplacophora" by Dr. Henning Lemche, Universitets Zoologiske Museum, Copenhagen.

A.M.U. P.D. meeting continued

R.O. Stotter- "Collecting in Fiji". An interesting talk well illustrated with many color slides.

Friday Evening- 7:00 P.M.

Annual Banquet- Mrs. Crawford Cate, Hostess.

S. Stillman Berry was the speaker at the dinner, and his diary written while a school boy was both entertaining and of great interest because he met and reported in that diary his contacts with a number of well known conchologists of that period. - H.N. Lowe, Alonzo Yates, Mrs. Ida Oldroyd and others known to all either personally or by their work.

Saturday- June 1

Roy L. Morrison- "Molluskan Life and Collecting in Mission Bay Before and After Dredging". The talk was illustrated by two large maps.

James R. Lance- "Principles of Taxonomy in the Nudibranchiata". The very clear descriptions and figures on the blackboard drawn by the speaker is well worth comment. It is indeed unusual for a speaker to be able to clarify the characters used for differentiation in the systematics of any group of animals not to mention one as confusing as this one.

The beautiful color film of the living animals following the lecture was much better understood.

Arthur D. Howard- "Pteropods of the Pacific Coast and N. Coast of South America". An interesting paper read by E.P. Baker and illustrated with slides.

Jean Wilkins- "Collecting Anew at Anaheim Landing"

The speaker gave a detailed account of the changes in the fauna of this well known spot, or perhaps it should be added, well known to all who collected actively a few years ago. Dredging and new construction accounted for many changes.

The A.M.U. P.D. concluded another successful year.

Paul H. Steele 1899-1957

Paul Haines Steele was born in Mt. Clemens, Michigan, February 10, 1899. His father, Charles B. Steele, was a Methodist minister in Michigan and Colorado. He attended Denver University where he became intensely interested in astronomy. He was later associated with the Natural History Museum in Worcester, Mass. Paul was an enthusiastic naturalist and took an active interest in the organizations devoted to the study of ornithology, astronomy, mineralogy, and conchology. He was for years editor of the publication and very active in the Western Bird Banding Association.

As a conchologist, Paul was particularly interested in the Cypraeidae and accumulated one of the most complete collections of this family. He was known as a serious student and his opinion was always considered that of an expert. One of his interests was the fauna of Easter Island, and his numerous papers on Cypraea caput-draconis have been accepted as important and scholarly reports.

Paul was a genial visitor and knew most of the seripus collectors and their collections. After his brilliant paper at the meeting of the American Malacological Union in San Diego (con.)

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, June, 1956, it was a shock to his many friends to learn that he was suffering from cancer of the lungs which took his life early this spring.

Wilbur Porter Cook 1865-1957

Mr. Cook was born in Ashtabula, Ohio, July 14, 1865. He was raised and educated in Chicago, Ill., Bolivar, N.Y. and Alfred University. He became an oil and gas producer until his retirement in 1904, and then while on vacation in Puerto Rico enjoyed collecting beautiful shells for recreation. He moved his family to California in 1906. Mr. Cook was an enthusiastic collector, and through many exchanges he added to his own collections. The result was a very fine collection containing many rarities. He passed away April 7, 1957, leaving as survivors his wife Ethel, and three children.

The cold facts stated above seem to inadequate. Those of us who were fortunate enough to know Mr. Cook will always recall his friendly smile, and his eager inquiries about shells.

Argonauta was one of his favorite families, and I wish that I could recall whether his largest specimen was a fraction of an inch larger or smaller than the next largest on record in the largest museums. The data is no doubt in the back issues of these Minutes, but in any event his collection of Argonauta would leave one almost incredulous even with the specimens before your eyes. Mr. Cook searched the world for super specimens of this genus, and to avoid any possibility of damage he would send his own stout wooden box half around the earth to have it returned with the specimen.

Mr. and Mrs. Cook had been living in Long Beach for a good many years, but I recall many pleasant visits to their large home in San Diego. Many years ago when he was building his shell cabinets I remember that he asked his personal friends to donate a piece of hard wood for the front of one drawer in a cabinet. Naturally, my wife and I selected a piece of birch which was polished into a beautiful piece. We were quite proud of our drawer. Pleasant little things like these, reminders of our happy times together, are the memories I wish to cherish.

John Q. Burch

Morris Schick April 4, 1868 - April 7, 1957

Mr. Schick was born in Philadelphia, and started collecting shells at the age of 16. He was closely associated for many years with Johnson, Philadelphia Academy of Natural Sciences. His regard for Mr. Johnson was always a favorite topic with him.

Mr. Schick with Mrs. Schick spent one year in Hawaii, and he always enjoyed telling of his collecting trips with Mr. Thaanum, Ted Dranga, and Professor Ostergaard.

He lived in Glendale, California over 50 years. Other hobbies included lapidary work and mineral collecting, the growing of rare cacti, succulents, bromeliads and begonias. He operated a nursery devoted to these plants.

In addition to the Conchological Club of Southern California, he was a member of the Glendale Lapidary Society and the Glendale branch of the American Begonia Society.

Mr. Schick is survived by his daughter, Mrs. Lillian Mae Webb of Los Angeles. He died three days after his 89th birthday.

The Conchological Club of Southern California had no member more regular in attendance. He was loved by all and when he failed to attend the April meeting, there were many comments. We learned that the reason was his last illness which lasted but a few days. He will be sincerely missed by all.

The Bernice P. Bishop Museum

The Bernice P. Bishop Museum in Honolulu is an institution of which all residents of Hawaii should be very proud. We considered it an honor and a privilege to spend many days studying the collections.

Mr. Edwin H. Bryan Jr. of the museum was such a cordial host that we at times were embarrassed because we knew of his multitudinous activities. He is one of those who leave you incredulous that one man could accomplish as much even by working the clock around without sleeping or eating. We read his articles in the daily papers which he seems to turn out by the ream, and in between he knocks out an occasional book on astronomy, archaeology, anthropology, or some other science. Therefore, we should not have been surprised to find Mr. Bryan to be one of the most competent observers of the systematics of the mollusks of the central Pacific it has been our pleasure to meet. Of course, we are prejudiced, but we sincerely wish that he could spare more time to devote to his check list and other matters pertaining to marine conchology. His work is needed.

The collection of the expedition to the Philippines sponsored by Mrs. Eleanor King should add greatly to the already extensive collection of the museum. Mrs. King should be sincerely thanked by all students of mollusks the world over.

It would seem logical to have the greatest Pacific collection of scientific material available housed in this great institution in Hawaii. Collectors of rare material from any locality in the south and central Pacific should consider it their honor to donate such specimens to the Bishop Museum.

It may grieve a collector to part with a rare specimen, but it would seem that the privilege of having his name on the acquisition label of a great institution where it will remain a monument to the collector after a fashion, should be a much greater pleasure.

The Burches are dealers, to be true, but we have been very proud of the privilege of donating many hundreds of rare shells to fill in the collections of a number of our great institutions.

John Q. Burch, while preparing a paper on the Naticidae last year (read at the 1956 meeting of the American Malacological Union), received as a gift from Professor Roberto Malorda of the Instituto Di Geologia of Torino, Italy, one of the specimens studied by Sacco of Tectonatica tectula (Bon.). This was one of the actual lot on which Sacco based the genus Tectonatica Sacco, 1890.

It is our understanding that this is the only known type specimen not at this time in the institution in Torino.

John Q. Burch was pleased to give this specimen to the California Academy of Sciences. Dr. Leo G. Hertlein advised that the specimen is now in the type collection of the academy and available to any student seriously interested in Paleontology or Conchology.

J.Q.B.

We are pleased to hear that the James Zetek collection of shells from Panama is going to Stanford University. All such collections representing many years of scholarly work should be preserved for future research.

Type Specimens

It is certain that no type specimen should be held in the hands of a private collector. In fact, it would seem logical if the International Commission should require the holotype of all newly described species to be placed in an established institution before the species may be recognized as valid. The confusion caused by this practice may be well exemplified by the action of Dr. Dall in using a specimen of the Button collection as a type leaving the shell in the hands of the collector. It is thought now that the type has been lost with great doubt in the minds of some regarding which species was in fact represented. At this time it would seem that the only logical reason for not placing a type specimen in an institution where it would be available for study by other interested students is obvious. If another should perhaps suspect that the species is a synonym or the characters incorrectly diagnosed placing the species in some other group, he would find it impossible to study the holotype, and of necessity be obliged to accept the published description for what it might be worth.

J.Q.B.

The Squirrel Complex

Shell collecting may be a game in which the contenders try to accumulate the largest number possible of certain rare shells, or perhaps they are thought to be rarer than they are due to such a race. In one instance it has been my pleasure to see an entire cabinet drawer filled with superb specimens of a species seldom seen in even the collections of the largest museums. Later I saw in other collections similar entries in the contest with huge lots of rare shells.

Few such collectors are interested in serious conchology, but oddly enough they have inadvertantly made a genuine contribution to science possible. The extent of variation in many species is unknown for the very simple reason that no one has ever seen enough of them to make such an observation. Before someone blows the whistle on this game by selling his collection, they should be urged to permit measurement of all specimens as well as careful notes of all apparent morphological characters. Furthermore, actual collectors should possess invaluable information regarding the ecology if given to a competent student.

In the meantime may the amusing fear continue- that some dealer might acquire some of them for distribution to institutions and serious students.

J.Q.B.

Fasciolaria distans Lamarck

The following personal communication from Dr. Horace B. Baker is appreciated:

" Dear Mr. Burch: Your note on Fasciolaria distans in the March no. of your " Minutes" was read with interest. In that connection , was not Hollister's identification of E. lilium (F. v.W), which he actually thot would replace F. distans from Campeche, based almost entirely on Lister, and the " type" in the British Museum ? Is Lister's " Campeche" any more trustworthy than Perry's locality, which Hollister rejected ? Does not Lister's fig. (Naut. 70-77) look more like the Florida form ? Without mention of the problem, I asked my wife, who knows Florida marines better than I, which of Hollister's original photographs for the plate 6 figures looked most like Lister's " daughter Anna's drawing, and she chose

(con.)

plate 6, fig.2, which is a reproduction of Perry. I would have selected figs. 11 to 13, which are from Florida. (I think 11 and 13 are reversed, and wrote Hollister but got no answer). Since Lister's collection must have kicked around a century or so before the foundation of the British Museum (Natural History), is the claim that the so-called " type" be the shell drawn by " daughter Anna" very convincing."

Note by J.Q.B.- It has been my impression that we have in hand a polytypic species, and if I am not in error, further study of the taxonomy of various supposedly monotypic species is beside the point. It is certain that many similar groups are in need of reclassification and clarification. If Dr. Baker is convinced that I am in error in this conclusion I will accept his opinion as one more eminently qualified to pass upon the matter.

The Childrens Museum
Honolulu, T. Hawaii

No one interested in shells could possibly visit Hawaii and fail to visit this charming little museum situated in the middle of a trully beautiful park. Mr. Karl W. Greene, Box 3751, Honolulu is the founder and remains the active curator. However, it is definitely a municipal affair, and as Karl states, it will continue after his passing. May that be the year 105.

There are many fine specimen shells in this establishment, but the outstanding lot are the Conus. This is Mr. Greene's specialty and he has here a collection of this family that would be a credit to any museum on earth. He is a careful student and has an excellent eye for differences in shell form, a quality really needed in this group.

Any collector having duplicate specimens of any species of fine Conus is hereby assured that if sent to Karl Greene as a gift to the Childrens Museum, your shell will receive a permanent home and be a credit to the donor for all time. J.Q.B.

The Aquarium
Honolulu, T. Hawaii

Mr. Spencer Tinker is the curator here. The Aquarium is in reality a branch of the University of Hawaii as I understand. However, there is a very fair collection of world wide specimen shells here under glass in cases. There are a few rarities among them and Mr. Tinker is a competent conchologist. Incidentally, his book is to be revised and reprinted soon.

After we shell collectors are through seeing the shells we may see the tanks full of perfectly impossible fish, electric eels etc. and probably wind up out watching the seals and turtles in the big pond. It is quite a place. Don't miss it while there.

Mr. Morris Schick, our late member and friend, whose death was mentioned on page 5 of this issue, had accumulated some very interesting books and periodicals including a complete set of the Nautilus, and some other good items. We are pleased to learn that the library is now the property of our members Mr. and Mrs. Crawford Cate, where it will enhance their already extensive conchological library.

Mrs. A.W. Gillis, 1904 N. Madison Ave., Pasadena 6, Calif. has written that she has been ill and will not be able to join us at the meetings for some time. However, she is much better and was expressing her interest in a number of new shells.

The Tha anum Collection
Honolulu, T. Hawaii

Mr. Ditlev Tha anum has been known as one of the world's leading conchologists for many years. He is no longer a young man in years, but he remains physically alert, and his opinion on the systematic status of a mollusk is exactly what one would expect.

The Tha anum collection is not a huge miscellaneous accumulation. It is a scholarly working collection.

We considered it a great privilege to visit Mr. and Mrs. Tha anum, and an honor indeed to be invited to return for another afternoon.

The character of the man may perhaps be better explained by a simple example of our conversation. I recall asking, "Mr. Tha anum, do you think the Hawaiian races of Cymatium are separable on shell characters from those of the Philippines and the islands to the south?". Without saying a word he placed a cabinet drawer of specimens before us. The long series gave the affirmative answer with no words required. "Murex of the Homolocantha group have puzzled me. Can it be possible to consider them all to be races of Murex scorpio Linnaeus?" Again we found a tray of beautiful specimens before us including a set of the type lot of Murex pele Dall. This lot made a negative reply unnecessary.

A sincere student favored by Mr. Tha anum might well learn more in an hour than he could by months of independent study.

Our visits to the Tha anums will always remain a high point in our conchological career.

J.Q.B.

Captain and Mrs. Fred Barnett certainly extended the island hospitality. We enjoyed the trips around the entire island in their car and under their description of the points of interest. And with them we visited a number of excellent private collections. Note* Fred had been ill and in the hospital for a check up, but has recovered and we understand is now back at sea.

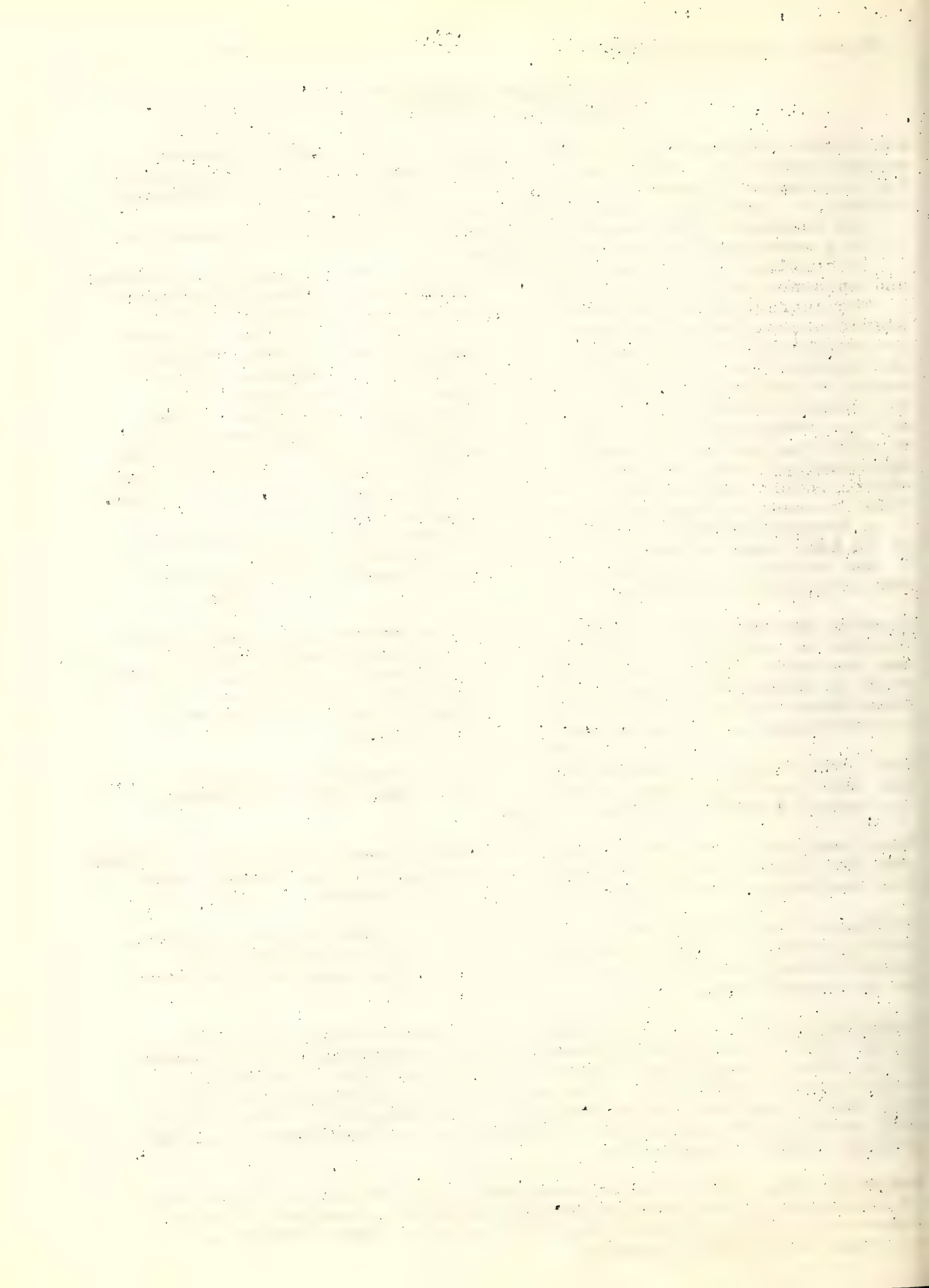
Mrs. Z.W. Craine of Norwich, N.Y. was our travelling companion and added greatly to the pleasure of the trip, all of us having the mutual interest of fine shells.

Mrs. Wray Harris was our hostess on several occasions. She is working with the marine shells in the Bishop Museum. We will always recall the luncheon of Taro root, La La etc. with pleasure.

Professor J.M. Ostergaard, formerly of Hawaii but now of Atherton, Calif. wrote us that he regretted missing the AMUPD meeting in Santa Barbara, but is in good health and we are expecting him south as our guest soon.

Achatinella sp. J.Q.B. now has a much greater respect for the large collections of this genus that has passed through his hands. To be true it was quite a successful Audubon bird watching trip right into the very home or so reported of Achatinella, but the one single specimen representing the day's catch of tree snails will probably attract no great interest other than being a highly prized trophy of one J.Q.B.

Marshall Sohl, who collected many remarkable shells while he was in Zamboanga writes from his present address, General Delivery, Morro Bay, Calif. He has been doing a lot of skin diving and has some interesting reports.



Hawaiian Academy of Science
 Thirty-second Annual Meeting, April 25, 26, 27 Honolulu, T, Hawaii

It was our privilege to attend this meeting. Many scholarly papers were read and well illustrated. Two of them were of unusual interest to those of us concerned with mollusks. The policy of the Hawaiian Academy is to limit the time of each speaker to a maximum of fifteen minutes, and while it is more than probable that the audience would applaud such a limit if J.Q.B. were speaking, the fact remains that many of the speakers could easily have held our interest for an unlimited report. Among these were:

New Concepts of Molluscan Systematics Illustrated by a Study of
Cypraea caputserpentis Linn- by Alison Kay.

We understand that this was a synopsis of a thesis of a candidate for a doctor's degree, and will be published. Therefore, it would not be fitting to review the subject in detail here other than to suggest that we will be eagerly waiting for an opportunity to study the complete work.

Organic Productivity in Marine and Terrestrial Environments by Philip Helfrich and Alan J. Kohn.

NEW BOOKS ON THE MOLLUSCA OF ROMANIA

Fauna Republicii Populare Romine

Mollusca- Fasc. I Gastropoda Pŭlmonata by Alexandru V. Grossu,
Academia Republicii Populare Romine-

Bound volume of 518 pages and 282 illustrations. 1955

The text seems to be entirely in the Romanian language. The figures are excellent. The bibliography is extensive. Anatomical drawings are clear where needed.

It is interesting to note the large number of type species discussed in detail. The keys are clear to genera and species.

** It would seem that this work should be recommended for the libraries of all students of systematics. There is no doubt but that much of our taxonomic confusion has been caused by the difficulty of determining the scope of many of the older genera described from Europe.

A limited number of copies are available from John Q. Burch \$7.50

Fasc. II- As above other than Gastropoda Prosobranchia si Opistho-
-branchia- 1956 Bound 220 pages and 101 illustrations.

The systematics are interesting and clear, even though one may smile occasionally from page to page thinking of the controversial matters. It is obvious that Dr. Grossu has followed Thiele to a large extent as indeed have most of us. A few examples will suffice- Familia Scalidae. Genus Scala (Klein, 1753) Bruguiere, 1792 with Epitonium (Bolton) Roding, 1799 in Syn.; Melanella Bowdich, 1822 with Eulima Risso, 1826 in Syn. The old question of whether the mere use of the name of a pre-Linnean author amounts to acceptance etc. In any event the work is well done and any student well enough informed to recognize the occasional question will quickly pass on and study the excellent descriptions of species.

*** A limited number available from John Q. Burch \$5.00

Publications Received

The Archibenthal Mollusca of New Zealand by R.K. Dell Dominion Museum Bulletin No. 18, Nov. 1956. 235 pp, 27 plates.

It is impossible to do justice to this scholarly report in a brief review. The combination of a study of shell characters, radula, protoconch, and other features in the consideration of a group or a species is impressive. Such a work should serve as a guide and an inspiration to other students. It is certain that work of this quality on many other faunas would result in both the recognition of many new species and genera as well as adding many to synonymy.

A limited number of copies may be had from John Q. Burch \$5.00

Types of Late Cenozoic Gastropods in the Frank Collins Baker Collection, Illinois State Geological Survey by A. Byron Leonard. Rept. of Investigations 201. Illinois State Geological Survey, Urbana, Ill. 23 pages, 4 plates.

A Catalogue of the Cerionidae (Mollusca-Pulmonata) by William J. Clench Bulletin of the Museum of Comparative Zoology, Vol. 116, No.2, April, 1957. 49 pages.

The species are listed in alphabetical order, the synonymy is given as well as the reference to original publication. This should be a priceless work for one interested in Cerionidae.

Philippine Snails of the Family Endodontidae by Alan Solem, Fieldiana, Zoology, Vol. 41, No. 1, April 26, 1957. Chicago Museum 8f* 12 pp 4 pls. The paper is well done giving a key to genera and species, a summary and bibliography. One new species is described.

Mollusques aquatiques de Cote d'Ivoire, I.-Gasteropodes by Eugene Binder Bulletin de l'I. F.A.N. T. XIX, ser.A, no 1, 1957. pp 97-125, 22 illust. showing numerous species.

Adiciones A La Fauna Malacologica Cubana- I by C.G. Aguayo and M.L. Jaime- Memorias De La Sociedad Cubana De Historia Natural " Felipe Poey", Vol. XXIII, No.2, March 20, 1957. pp 117-142, 6 pls.

A number of new species and subgenera of the land fauna are described and well figured.

The Fresh-Water Mollusca of New Zealand. Parts II and III Trans. Roy. Soc. of New Zealand Vol. 84, Part 1, pp 71-90, Oct. 1956. Part II- The Species Previously Assigned to the Genera Limnaea and Myxas by R.K. Dell. Part III- The Genus Physastra.

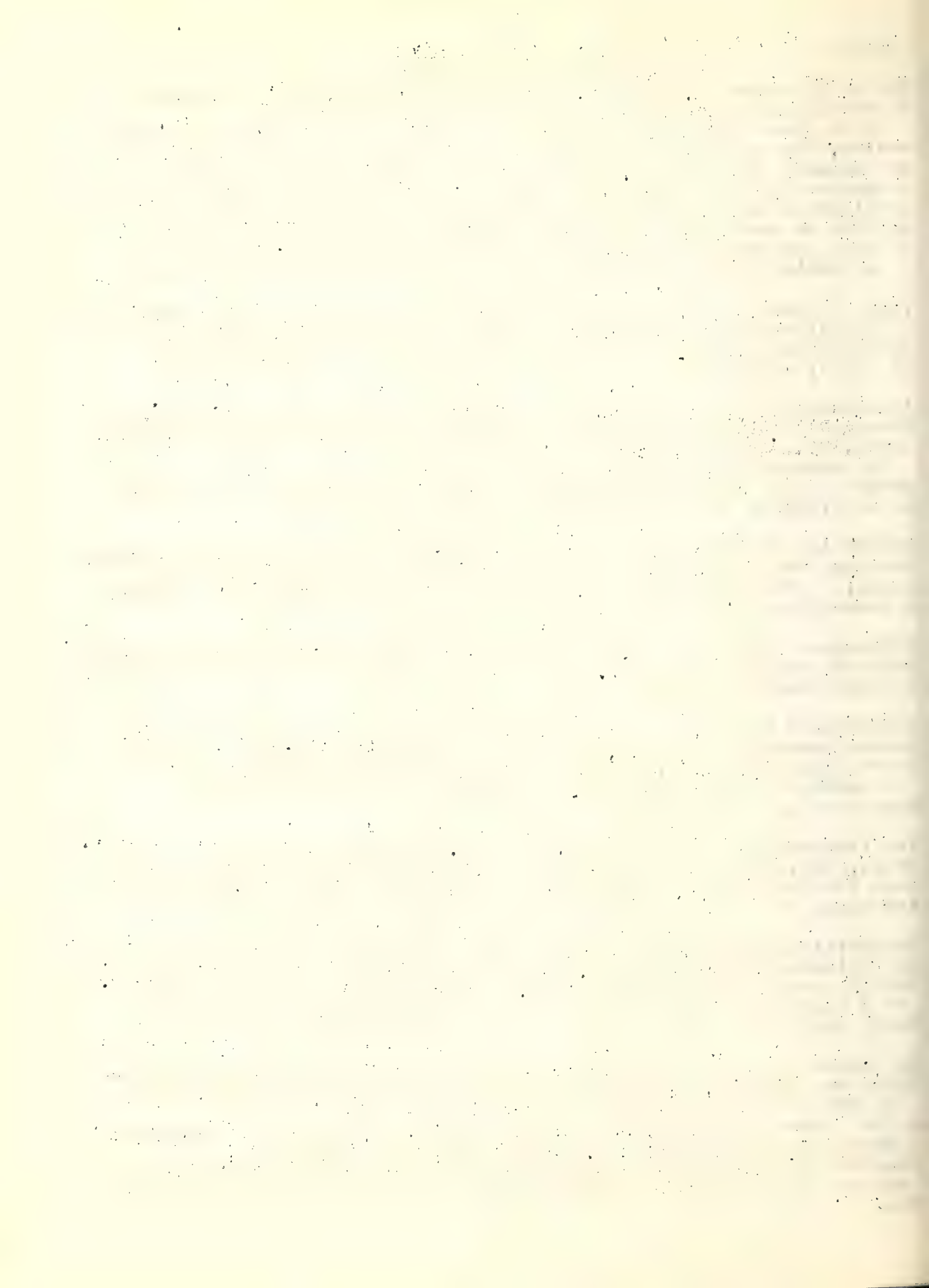
Faunistisch-okologische Untersuchungen über Süsswasser-Mollusken im Verlandungsgebiet am Süden des Ammersees by Paul-Eckard Salzmann Veröff. Zool. Staatssamml. München, Aug. 1956 115pp 6 pls. 7 figs.

** A carefully prepared study. Some copies available from John Q. Burch \$2.00

S. Jaeckel Sen- Die Weichtiere (Mollusca) Der Afghanistan-Expedition (1952 und 1953) J. Klapperichs- Akademie-Verlag. Berlin, 15.12.1956 pp 337-353 10 text ill.

- do- Über Land-und Süsswasserschnecken Jugoslawiens und Albaniens Mitt.Hamburg.Zool. Mus. Inst. Band 54, Seite 21-32, 1956

Jaeckel, Von Siegfried H.- Die Wassermollusken der Nuthe-Niederung und des Raumes zwischen mittlerer Elbe und Warthe pp 185-217 4 figs map.



The Nautilus- Vol. 70, No. 4, April, 1957

Haliotis rufescens at Sunset Bay, Oregon By Richard B. Lyons

Interesting account but not too surprising. We have numerous records from Crescent City, Calif. which is almost as far as you can go and not enter Oregon.

Easter Island Shells by Paul H. Steele. We will all regret that

Paul was not permitted to complete his research on these shells.

Marine Shells From Altona Lagoon, St. Croix, Virgin Islands

By G.W. Nowell-Usticke

Ecology of Vitrina limpida Gould By Edward J. Karlin

Haplotrema From Western Montana by Royal Bruce Brunson and Unda Osher

A Note on Cuna dalli By Donald R. Moore

A Bulinus-Like Shell Anomaly in Helisoma anceps by Edward H. Michelson.

Catalogue of the Land Mollusca of Argentina by J.J. Parodiz.

This systematic list should be of genuine value to one working with land shells from Argentina.

William G. Fargo, of Jackson, Michigan and Pass-a-Grille, Florida.

We knew of the death of Mr. Fargo and we lost another friend of many years. His death on Feb. 9, 1957 at the age of 90 is worthy of comment because he was active up to a short time before his death. A letter from Mr. Fargo was never a trivial matter. It usually required some serious study before answering. I recall a number of years ago when I sent for a photostat of a rare generic description before daring to attempt an answer. He was a subscriber to this paper from the beginning, and frequently urged this writer J.Q.B. to attempt more serious work and publication. Who does not appreciate a little flattery? While his interests were in recent years largely the fossil and Recent of Florida he did study a great many groups worldwide and particularly the semi-microscopics. I recall sending over 1,000 species to him from this coast. That was a commission that would cause me great reluctance to attempt today. One of the penalties of growing gray is that we find old friends with increasing frequency in the obituary columns.

Heat Death and Associated Weight Loss of Oyster Crassostrea virginica by Milton Fingerman and Laurence D. Fairbanks. Tulane Studies in Zoology, Vol. 5, No. 4, April 1, 1957.

Materialien zur Kenntnis der palaarktischen Zonitiden (Gastropoda I Oxychilus (Oxychilus) rumelicus (Hesse, 1913) and II Oxychilus (Conulopolita) raddei (O. Boettger, 1879) nebst Bemerkungen über einige andere Zonitidae aus den Höhlen des westlichen Transkaukasien. Annales Zoologici Tom. XVI, No. 19 and No. 20, Warsaw, Poland, 1957. Two papers I with 3 text figures and map, II with 4 text figures. By Adolf Riedel

Beitrag zur Morphologie und Biologie einer sudwesteuropaischen Susswasserdeckelschnecke (Melanopsis dufouri Fer.) Arch. f. Hydrobiol. Nov. 1956 and

Quantitative Untersuchungen über die Nahrungsaufnahme der Landdeckelschnecke Pomatias elegans (Müller) - Sond. Zool. Anzeiger Bd. 157, 1956. By Ewald Fromming, Berlin

Studies on the Shell Remains in Bays by Tadashige Habe- Contr. to Physiology and Ecology, Kyoto Univ., 1956. Summary in English.

Notes on Four Korean Land Snails, by T. Habe. Zool. Mag, vol. 65. no. 5

Anatomical Studies on the Japanese Land Snails (6) The Superspecific Groups of the Family Enidae By T. Habe. Zool. Mag. Vol. 65 No. 7

-do- Anat. St. #5 Bradybaena circulus ...

Note from Myra Keen

Last month I received from Mrs. Paul Steele an unusual cowry that her husband had asked her to send to Stanford. This specimen of Cypraea stercoraria, from Africa, had successfully repelled an invasion of two small barnacles, which had gained temporary foothold on the dorsal surface of the shell, by coating them with a thin layer of glaze. I first saw this shell in the collection of Mr. Jones, who was a dealer in Berkeley-- in fact, the person who got me interested in shells. Years later, when Mr. Steele was visiting Stanford to see our cowry collection, I mentioned this specimen and wondered aloud what could have happened to it after Mr. Jones died. To my delighted surprise, Mr. Steele replied that he had bought it, that he had it in his car at that moment, and he went out to get it and show it to me. It is touching that he should have remembered this episode and have willed the shell, which he treasured, to Stanford.

XXX ? ? ZZZ

Hwass or Bruguiere ?

The Hawaiian Shell News have aired this matter very thoroughly, and the references cited in favor of Hwass (Clench in Johnsonia etc.) are so imposing that J.Q.B. will be contented to simply ask a few more questions of the same authorities. Having followed Tonlin and most of the professional scholars of Europe, and having answered a note from Mr. Karl Greene advising the use of Bruguiere as the authority, it is obvious that there is a difference of opinion.

The issue seems clearly to be: When an author incorporates unpublished manuscript with his own work, does the credit go to the one who published the work or to the writer of the manuscript?

Opinions of others are solicited if this is again a controversial matter. In fact, it is almost a shock to me to hear that the question had not been laid to rest long ago, and the reverse of what seems to be the consensus of opinion in some quarters now.

Encyclopedie Methodique (Dictionnaire Encyclopedique Methodique), Paris, Liege 1782-1832. 196 vols. This huge work contains contributions of a host of specialists. Sherborn and others have published information on them and the dates of the publication of the various parts. To credit the various authors of fragments of this work is analagous to breaking down the Encyclopedia Britannica to the host of authors of each article. Should this be done? It would seem to me that our system of nomenclature is already top heavy with cumbersome detail. It is admitted that Hwass may have written some of the text in this work, but the very obvious fact that Bruguiere mentions Hwass's name in the third person on occasions would seem to me to indicate that Bruguiere was writing the work.

Must we engage in tedious and puzzling bibliographic work to determine who wrote what part of a book, or shall we follow the old fashioned custom of simply believing that the man whose name appears in gilt on the spine is the author?

Countless examples may be given of analagous questions. The following are a few examples.

This afternoon I spent a little time collating and preparing to place on the shelves and offer for sale a set of Chenu, J.C.: Encyclopedie d'Histoire Naturelle. Paris 1850-1880- quarto 22 vols. By carefully checking the fine print (below that of Chenu) it is possible to determine the author of some of the parts. It must be agreed that recognition of the true authors would be justice in some cases, not all, but it would certainly add greatly to the confusion in the use of these sets. To break down this set of Chenu to the various contributions would require a page or more of type.

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It is well known that Valenciennes wrote the article on Terebratula in Tom VI of Lamarck's "Histoire nat. des Animaux sans vertebres" 1815-22. Must we at this late date change all references from Lamarck to Valenciennes?

The Deuxieme edition of the same work was expanded to 11 volumes largely by the notes of Deshayes and H. Milne Edwards 1835-45.

We have manuscript data published in most of the large sets. How about the Manual of Conchology? For example let us take Vol. XVII. We have the monograph on the Scaphopoda by Pilsbry and Sharp, 1898. Among others the following description appears: p. 150: Cadulus quadrifissatus (Carpenter), n. sp. pl. 29, figs. 10, 11, 12, 13. The facts are that this description was taken from an unpublished manuscript of Carpenter. To be true Carpenter called it Siphodentalium 4-fissatum. We have no way of knowing whether the then deceased Carpenter would have approved of the description and figure or not. It is obviously the work of the authors of the monograph, namely, Pilsbry and Sharp. While it seems to be a generous gesture on their part to give the species to Carpenter, we abandoned the reference to Carpenter entirely, and use the following label for this species: Cadulus quadrifissatus Pilsbry and Sharp, 1898.

It would seem to be the opinion of some that the name of the author in gilt letters on the spine and as author on the first page of one of these old books should be entirely ignored, and instead (if we can locate a set) go to the work of Sherborn and other bibliographers before daring to believe that the work is really that of the author whose name appears as editor and publisher.

I have a few more in mind but this should be sufficient for saying my piece at the moment. Your views on this subject will be appreciated.

J.Q.B.

A personal letter from Mr. Henry Dodge is sincerely appreciated. This data was called to my attention but not acknowledged before. "I have just returned from a six months absence and have read your Minutes number 163 (November, 1956) for the first time. On page 6 you want to hear a reason for not using the Solander names appearing in the Portland Catalogue such as Murex elongatus. This name, like all the Solander names appearing in the Portland Catalogue, was never published by Solander. They appeared in manuscript on his species slips, which were designed to be incorporated in a printed work on Natural History, which was never written. George Humphrey, who was responsible for the Portland Catalogue, copied many of the Solander "names" from these species slips and added new species of his own. Both categories of names should therefore be attributed to Humphrey alone, although many writers have used the style "Solander" Humphrey. I consider even this to be a clumsy practice."

A. Haven Smith, 222 North Pine St., Orange, Calif. "Dear Mr. Burch: My wife and I are planning a cruise on the Monterey to Fiji, Samoa, Tahiti, New Zealand, and Sydney, Australia. We will be in those places so short a time that I cannot do much collecting. However, I would like to secure specimens in each of these places. Could you give me the names of some collectors in those places from whom I might get some shells either by exchange or purchase."

Mr. Heathcote Woolsey of Kent, Conn. passed away this spring. He was an enthusiastic collector and an old friend. I have many rare shells in my own collection from our exchanges.

Dr. Mattox called the meeting to order at 7:45 P.M. The minutes of the previous meeting were read and approved.

Mr. Crawford Cates provided the membership with copies of the Shell Oil Company booklet, "Let's Collect Shells". More giveaways by John Fitch, gobs of Himnites Multirugosa and Polinices Lewisii from Newport and Oceanside.

Anyone planning a trip to Hawaii profited from Mr. D. L. Palmer's recounting of his collecting experiences in Hawaii, especially the Island of Oahu. Mr. Palmer illustrated his talk with an impressive display of Hawaiian shells and a large map of Oahu which indicated the best collecting spots for certain species.

Following Mr. Palmer's enjoyable talk was John Fitch who acquainted us with his unusual hobby of collecting fish otoliths. Fish otoliths being a rather unfamiliar subject, there were probably many of us who were prepared to suffer through an hour of John Fitch's eccentric interests and just grin and bear it. Mr. Fitch, as usual, pleasantly surprised us.

And fish otoliths are important after all, for many reasons. The otolith, we learned, is composed of an extremely durable calcareous substance that often survives intact after all other body parts of the fish have disintegrated; it bears annular rings by which age can be accurately determined; the otolith of each species has a distinctive shape; and the otoliths within a given genus exhibit a relationship in form.

Mr. Fitch has developed otolithology to an exact science. He has been able to identify fossils when there has been mighty little left to identify. Related species of fish that can hardly be told apart except by involved studies and measurements, Fitch can quickly differentiate by their obvious otolith differences. He showed us color slides of a few specimens from his collection of over five-hundred species. Each species clearly manifested an individual pattern of angles, bumps, serrations, grooves, pits, or ridges.

Those of us who were present at this talk are now unanimously interested in fish otoliths. It is apparent that John Fitch's hobby is actually an important scientific work.

The meeting was adjourned at 10:15 P.M.

MINUTES 171

SEPT. 1957

CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

Subscription \$2.50 per year

We are now meeting the first Tuesday of every month at 7:30 P.M. at the Los Angeles County Museum, Exposition Park, Los Angeles, Calif. All interested persons are cordially invited.

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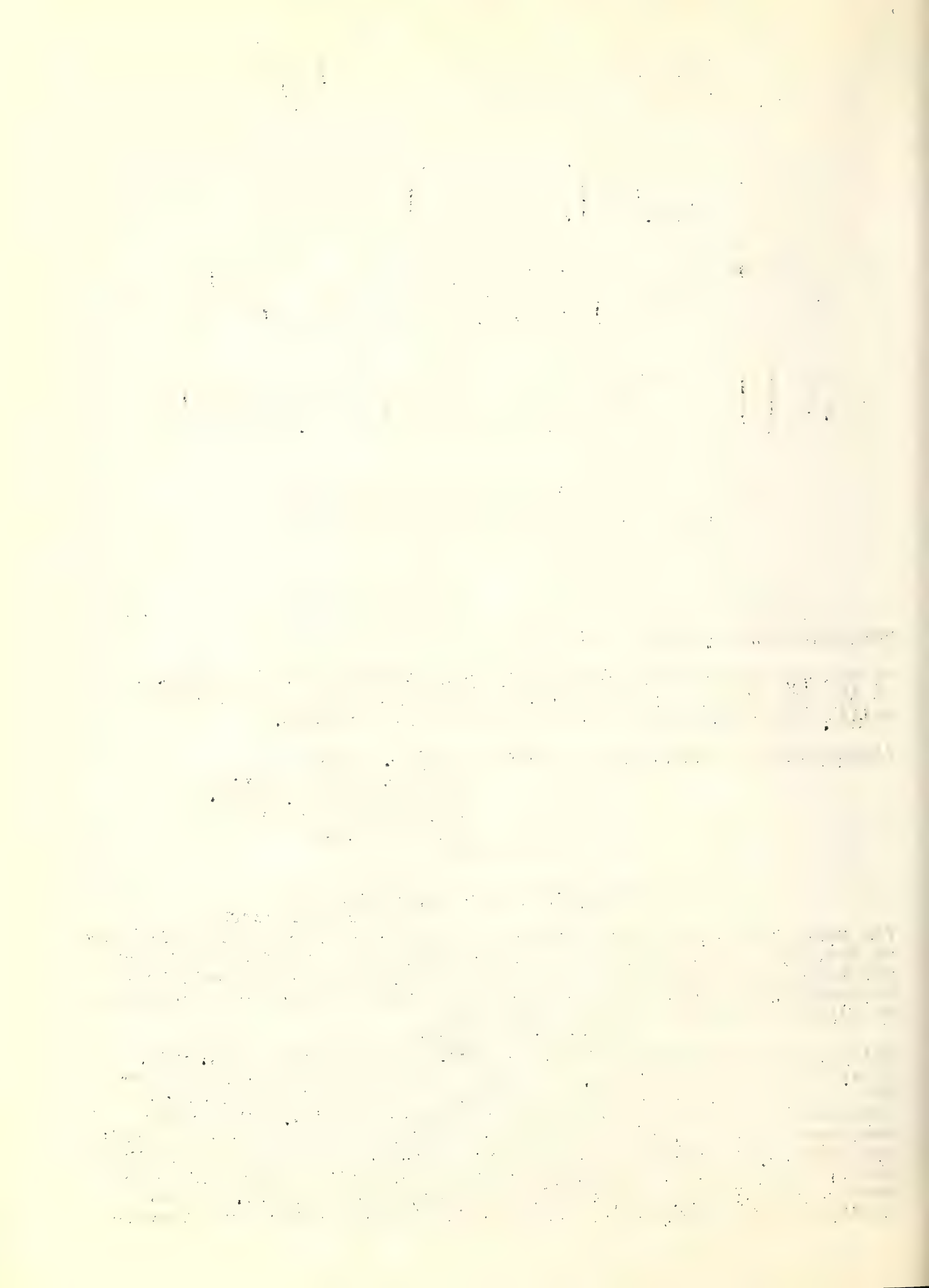
MORE CONTRAVERSIAL NOMENCLATURE

By John Q. Burch

Too many well intentioned students of mollusks dismiss all criticism of the status quo on the well known theory that the books they have not read do not exist. Is the truth necessarily what we believe? No particular revolutionary system is endorsed here, but the airing of clashes of ideas may be constructive.

Splitting of Genera

This is the title of an article in Nature (England), Vol. 178, Dec., 1956 by D. Verdcourt. The author states " The recent passion for the progressive splitting of genera has spread through most branches of zoology and latterly to botany as well." The author mentions what he considers " absurd limits" in some groups of birds and others. The steady march of this practice goes almost unnoticed until large general or popular books are compiled where all recent work is uncritically assimilated regardless of quality. Two such Australian works on shells and a recent book on birds are illustr-



-ations." " ... At present, names are very often proposed on flimsy grounds and the work of proving their validity or otherwise is handed down to future workers. For example, Steadman and Cotton have summarized the accepted classification of the Cypraeidae, and the genera and even subfamilies are separated on characters which are no higher than specific. New genera are established using merely the specific characters of the unique species included without any additional evidence. The result is that two such species as Cypraea tigris L. and C. pantherina Sol. are placed in different genera, whereas they are only just distinct species which actually hybridize. Such absurdities have no standing in nomenclature.

The author proposes that the two International Commissions for Nomenclature consider a clause in their rules laying down that no generic name proposed after a certain date (Possibly placed in the past) has any standing unless full reasons for its separation be given, not merely that it must be accompanied by a description. The interpretation would vary from group to group. For example, no mollusc genus should be proposed without a comparison of its anatomy with allied genera.

Systematic Zoology, Vol. 6, No. 1, March, 1957, contains a paper "A Protest Against the Atomizing of Genera", with Special Reference to the Hepialidae (Lepidoptera), by Jiri Palct. It seems that the entomologists have some differences, but their nomenclature is stable compared to the fantastic systematics proposed by a number of writers on mollusks.

"More on Margaritiferidae" is the title of a paper by Dr. Joshua L. Baily Jr. in the same publication. This is a discussion of a petition to the International Commission on Zoological Nomenclature.

The mythical feats of Hercules will be repeated a thousand times if our I.C.Z.N. can succeed in passing upon a fragment of the controversial names involving mollusks alone, and expect to render opinions in this century.

It is amusing to read the comments of countless scholars who have considered the same problem. David Starr Jordan was a prolific author on matters of nomenclature, and always a staunch defender of the status quo. In justice to any controversy both sides should be heard and considered. A file of Dr. Jordan's papers is interesting to read. A number of them are before me at the moment, and a few quotations may be of value here. If we are at times disposed to be critical of some of the generic names applied to mollusks, it may make some of us happy to know that it might be even worse. For example, in one of Jordan's papers in Science, Dec. 10, 1926, he is taking issue with a paper by Dr. F.P. Felt and Dr. S.C. Bishop, Am. Nat., May, 1926. Quote from Jordan "It is not necessary to follow the unpleasant precedents of Edvardotrouessartia, Asmithwoodardia, and the like. When Nichols broke out in Microsthomatichthyoborus, I expressed the pious hope that "No one will ever attempt to break this record as to length of generic name." End quote.

There have been a number of scholars who urged the adoption of a prefix to generic names to indicate the systematic position, and Dr. Jordan states, "It was my fortune in Gratz to hear Dr. Rhumbler read his paper advocating the use of prefixes to generic names, by which the systematic position of the genus could be indicated. I believed then as now that there were two serious objections to his own rather clumsy scheme or to any other of like nature. It will

never be adopted, and if adopted would only add to the present confusion..." End quote. It would be indeed presumptuous to take issue with so great a scholar as Davis Starr Jordan, but this paper was written over 31 years ago, and in my humble opinion, it would be simply impossible to add to the present confusion.

There have been many plans suggested to substitute numbers for species. Jordan replies to these, "The proposition to indicate species by numerals is wholly untenable. It is hard to remember specific names in general... But to most of us the remembrance of meaningless numerals is a thousand times more difficult. To ascertain the identity of Number 43, with that of Number 86, to know which author got in his Number 46 first, as to whether the hastily described Number 39 of Coccinella really belongs to that genus are matters which no international commission could or would ever try to handle." End quote. Some of our current authors on mollusks would simplify this numerical scheme in short order by making each number a genus.

Certain professional scholars were apparently very annoying to Dr. Jordan. For example, a paper in Science, July 1927 is titled "Concerning Species Grinding". It seems that Dr. James G. Needham had published a paper lauding the work of Dr. Curtis Dates Lloyd, who was one of the severest critics of the system. Dr. Jordan states "In a general criticism of workers in taxonomy as engaged in "species grinding", practiced for the purpose of seeing one's name in print", "a sort of cheap notoriety which places a premium on slipshod and hasty descriptions", he takes a needless slap at a group as a whole signally unselfish and conscientious..."

A paper by Dr. Carl Hubbs, Science, March 21, 1930 is before me. It is rather a lengthy paper titled "Scientific Names in Zoology." Dr. Hubbs was a much younger man when he wrote this paper. He may have other thoughts today, but one paragraph is of particular interest. Dr. Hubbs states "It is becoming increasingly clear that these name changes, due to genus splitting or shifting, are the chief concern of those who long for a stable nomenclature. It is unfortunate that the changes in genus concept should alter the scientific name of an animal. The fault lies in the binomial system of nomenclature. This system confounds classification, which ought to be flexible, with nomenclature, which should be fixed. A uninomial system of animal names would divorce classification from nomenclature and would presumably emphasize the fact that the species is the most natural objective of all systematic groups. It would certainly shorten animal names. The uninomial system has been found workable in mineralogy, chemistry and astronomy, and would have many advantages in zoology." End quote. Dr. Hubbs may have had a crystal ball before him as far as conchology is concerned. We are rapidly approaching a "uninomial system". If we indeed intend to place every mollusk that can possibly be separated from another by any character in a separate genus, why clutter up the books with two names?

Do we need another system of nomenclature?

It is obvious that the present International Commission of Zoological Nomenclature is confined to passing upon the legality of matters presented to them, and lack authority to question the value of a name.

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What is the fundamental purpose of a system of classification ? Is it to assist the serious student of that subject by giving him an efficient method of naming the items, or is it entirely designed to reward long forgotten ancient scholars ?

With full appreciation of the infinite variations of life, it would still seem to be logical to at least attempt some standard definition of a species.

A genus is composed of one or more of the questionable species because some writer has so stated, and for no other reason. This is a simple fact even if it does sound like nonsense. Maybe it is.

Some Publications Received

Aspects of the Biology of Pomatiopsis lapidaria (Say), (Mollusca: Gastropoda: Prosobranchia) By Dee Saunders Dundee- Misc. Pubs., Mus. of Zool., Univ. of Mich., No. 100. June 25, 1957 65pp, 14 pls., 1 fig., 2 maps. Listed for sale at \$1.00

The anatomical plates are remarkably fine, and the work seems to be very thorough.

Key to the Genera of Freshwater Gastropods (Snails and Limpets) Occuring in Michigan. Mus. of Zool., Univ. of Mich., Circular #3, 1957. 8 pp, text figs. By Harold J. Walter and John B. Burch.

The title states that this illustrated key is for Michigan. However, it is an excellent paper and should be very handy indeed for use in any state.

The Morphology of Pomatiopsis cincinnatiensis (Lea), An Amphibious Prosobranch Snail. By Henry van der Schalie and Dee Saunders Dundee. Occasional Papers of the Museum of Zoology, Univ. of Mich. No. 579. 17 pages and 7 plates.

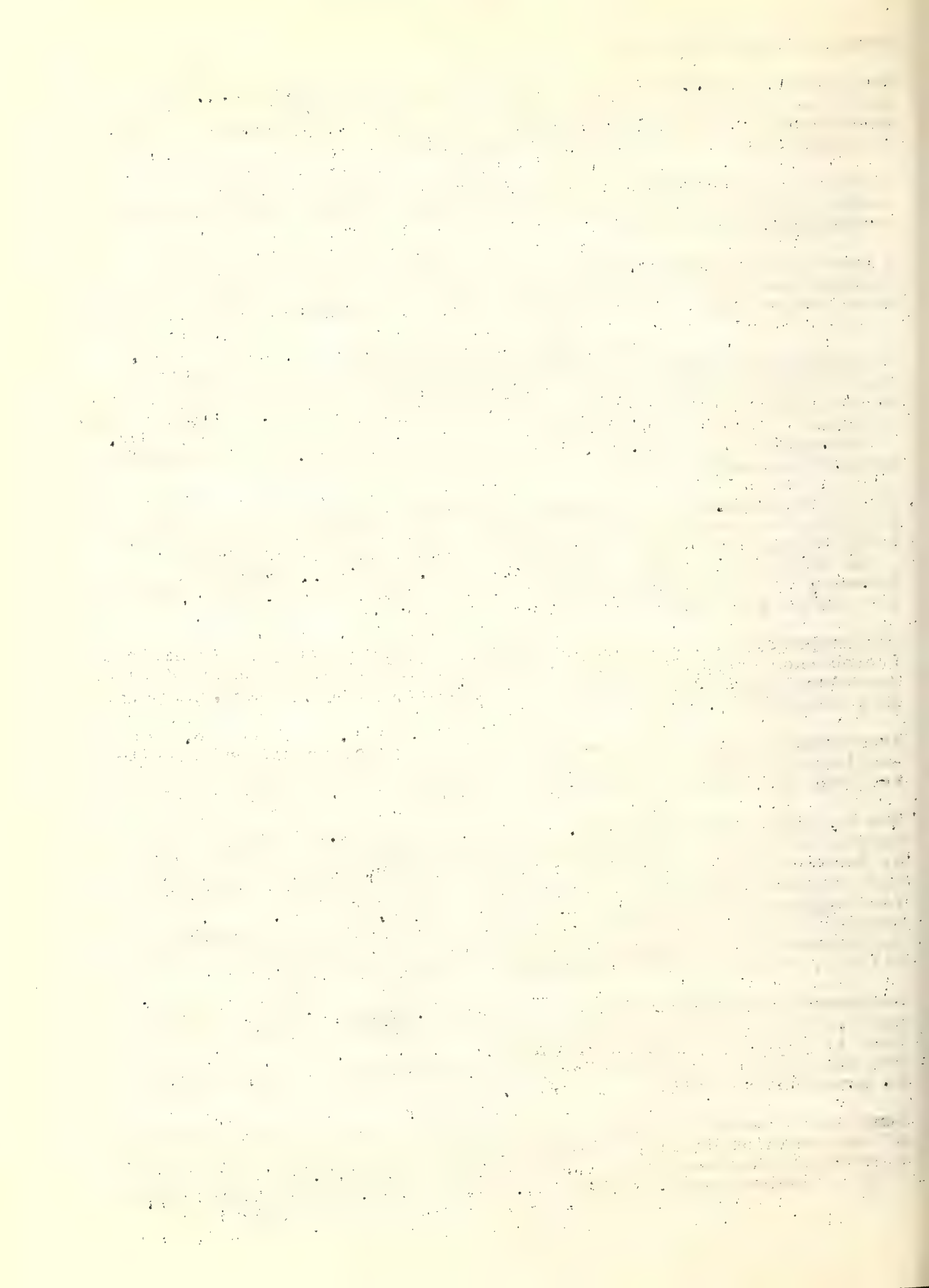
Non-Marine Mollusca from Salobra ,Matto Grosso, Brazil and a Collection of South Brazilian Artemon By Alan Solem. Notulae Naturae, No. 287, The Acad. of Nat Sci. of Phil. 14pp 1 pl. 1956

The Relation of Physiography to the Types of Freshwater Environments and the Presence of Austrolorbis glabratus in Puerto Rico By Harold W. Harry and Billy G. Cumbie Am Jr. Trop Med. & Hyg. 1956 and Stream Gradient as a Criterion of Lotic Habitats Suitable for Austrolabris glabratus in Puerto Rico. 1956
Studies on the Quality of Fresh Waters of Puerto Rico Relative to the Occurrence of Austrolabris glabratus (Say) By Harold W. Harry, Billy G. Cumbie and Jose Martinez de Jesus. March, 1957

Suriname Freshwater Snails of the Genus Pomacea by D.C. Geijskes and T. Pain Studies on the Fauna of Suriname and Other Guyanas. Vol. 1, 1957. pp 41-48 and 2 plates.
The species are well described, the plates are clear. The synopsis is excellent as well.

Some New Off-Shore Mollusca from New Zealand by R.K. Dell- Records of the Dominion Museum, Wellington, New Zealand. pp 27-59, 69 figs. A carefully prepared work - some very unusual species described.

** A limited number of this paper are available from John Q. Burch



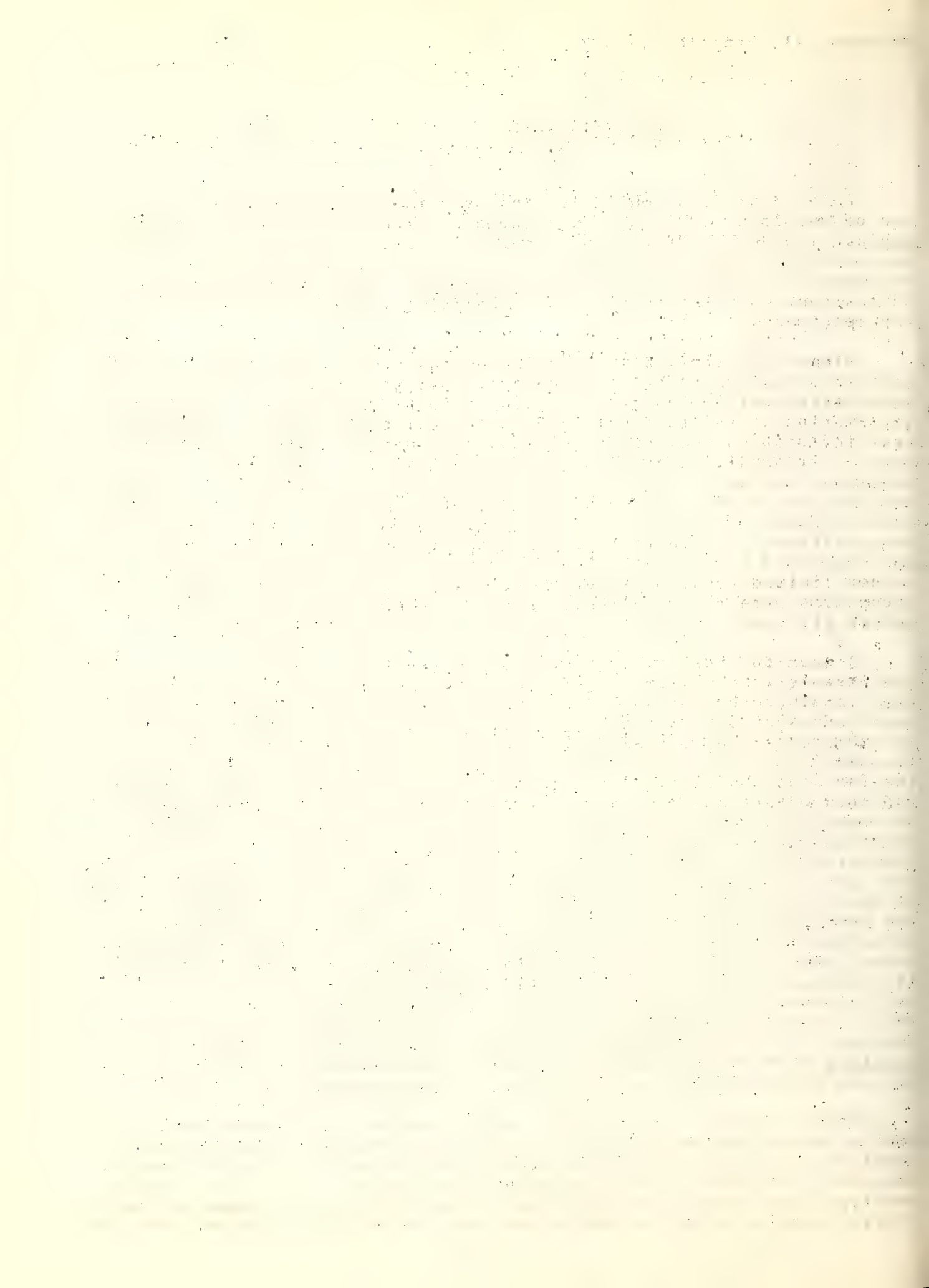
Haliotis virginia By Robert R. Talmadge
(Read before the meeting of the A.M.U.P.D. at Santa Barbara,
May 29, 1957)

A few years ago, while looking over the abalone in the trays of one of our local dealers, I was shown a large lot of the Haliotis virginia. The dealer stated that there were probably several of the subspecies of the virginia represented in the lot. As the material had reached him in more or less mixed lots, and as he did little work on this group, only the specific name Haliotis virginia could be used for the specimens.

Since that time, all of the named subspecies, many from the type locality (topotypes) have become available to the writer as part of a comparative collection or on a loan basis. With these specimens came information as to the localized ecological conditions and other general information that proved of interest when the lots were plotted on a map. As usual, these first plottings indicated many areas not represented, and a special effort was made to obtain material from intermediate localities. By such methods, it is possible to plot out the range of the various subspecies as well as to locate the areas of intergradation. In contrast to other species of the Haliotids that had been examined in the past, the Haliotis virginia appeared to have rather limited areas of intergradation, the contact areas between the subspecies were rather abrupt. A quick examination of the map, together with major ocean currents gave a clue to the explanation.

A warm subtropical current from the central South Pacific strikes the islands in the vicinity of East Cape, splitting into a northern and a southern subcurrent. The warm waters flow north along the north coast and are lost in the Coral Sea. This presents a warm temperate to subtropical habitat along the north coast. The southern arm of the current swings eastward, passing the Chatham Islands and is lost in the far South Pacific. These islands lie at the convergence of warm and cold waters and have a rather curious mixture of marine fauna. The west coast of New Zealand is washed by a temperate current that forms a massive eddy in the Tasman Sea. At North Cape a situation similar to Punta Banda in Baja California is mentioned, warm waters on one side, temperate waters on the other. The cold subantarctic waters of the south reach the southern shore of Stewart Island, where they are then mixed with other lesser currents, bringing a cool temperate situation along most of the coasts. With this variation in temperatures, and associated variations in the chemical composition of the sea water, the food of the Haliotids would alter from cline to cline. As Ino so ably illustrated, the food of this mollusca governs the shell. Thus we would expect to find variations of a species in each separable climatic situation. When the plotting of variations of the virginia were combined with the general temperature ranges, a noticeable and definite correlation of the two were noted.

On the north coast we find a rather small, thin, ovate shell, with a channel below the siphonal angle and crossed by low rounded lamellae. This type of shell abruptly merges with a elongat, smooth, deep shell at North Cape. Specimens from the east side seem to be of one type, while specimens taken on the west side of the cape are the other. This is in an area where two currents merge, one warm, the other



temperate. The next area of intergradation is somewhere in the Bay of Plenty, north of East Cape. Insufficient material from this locality makes any definite line impossible. Specimens examined in various lots indicate that both subspecies are found, together with a much larger number of intermediate specimens. This mixture is indicative of intergradation.

In the subantarctic waters of the south there is a rather thick, short, deep race, that has strong to heavy cording and lacks the groove below the siphonal angle. Specimens from the south shore of Stewart Island are so similar that they may be classed as the same. Specimens from the north shore of this island and from the Foveaux Straits fit in with material from the rest of South and North Island.

To the east on Chatham Island we find another small race, that is more depressed than the other races examined, has the channel below the siphonal angle, is ovate, and is smooth, lacking the lamellae of the northern race.

Over the rest of North and South Island we find a race that is thin, deep, elongate, no groove below the siphonal angle, and is sculptured with fine cordings. The only difference noted is that there is a tendency for southern specimens to be larger than northern ones.

The history of the names utilized to cover the geographical races is interesting. The earliest date found by the writer is that of Chemnitz, who figured and described the virginia in his Conchological Cabinet of Martini in 1782. As Chemnitz failed to follow the binomial system of Linnaeus, the name and authority that is now used is that of Gmelin, Systema Naturae Ed. XIII, 1792. The type locality of the nominate race is unknown, as Gmelin only used the term "novam Seelandiam". However, he did refer to the figure as given in Chemnitz, which is beyond doubt the race inhabiting most of North and South Islands. Here again we run into a black wall, as there is no indication from the figure or in the text as to where the specimen figured by Chemnitz was collected.

The next name presented to the malacologists was that of Gould, who described the northern race under the name of Haliotis crispata in 1847, in the Proceedings of the Boston Society of Natural History. His type locality was the Bay of Islands.

Filhol in the Comptes Rendus, XCI (91), 1880, gave us the Haliotis huttoni for the cold water race to the south, with Auckland Island as the type locality.

The most recent description and name is that of Powell, who separated the Chatham Island race under the name of Haliotis virginia moraria in the Records of the Auckland Institute and Museum in 1938.

My most grateful appreciation is extended to Dr. C.A. Flemming of the New Zealand Geological Survey, for specimens and information; to Dr. Leo Hertlein of the California Academy of Sciences for the use of the library and for special information; and to the private collectors in New Zealand for specimens and information on a local level.

Robert R. Talmadge
Willow Creek, California

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MINUTES OF THE MALACOLOGICAL CLUB OF SOUTHERN CALIFORNIA, July 2, 1957, #171

In view of the absence of both Dr. Mattox and Dr. King, the meeting was called to order by the secretary at 7:40 P.M. Mr. John Fitch was requested to act as chairman for the evening.

Some interesting new publications were reviewed by Mr. Fitch and Mr. Burch.

The minutes of the May meeting were read and approved.

The remainder of the meeting was allotted to discussion of the recent annual meeting of the Pacific Division of the American Malacological Union, which was held May 30th through June 1st at Santa Barbara. A motion was passed for the organization to purchase for its records a group photograph taken at that meeting.

There followed brief summaries of papers read at the AMUPD meet. Mrs. Chace reported on four papers: S.S. Berry's "Is the Colorado River an Efficient Barrier to Mollusk Distributions?"; Crawford Cates' "Notes on Cypraea"; Nettie MacGinities, "Neptuneidae of Point Barrow"; and Robert Talmadge's "New Zealand Haliotis virginia".

Mrs. Faye Howard reported on: Dr. Albert Mead's "Disease Transmission in Terrestrial Mollusks"; Dr. Berry's "Double Trouble in Violet Snails"; Mr. R.O. Stotter's "Collecting in Fiji". Mrs. Howard also distributed copies of her own paper, "Collecting at San Felipe".

Mr. E.P. Baker, chairman of the AMUPD, reviewed the following papers: Roy Morrison's "Molluscan Life and Collecting in Mission Bay, Before and After Dredging"; Dr. J. R. Lance's "Principles of Taxonomy in the Nudibranchiata"; Dr. Arthur Howard's "Pteropods of the Pacific Coast and North Coast of South America"; and Jean Wilkins' "Collecting Anew at Anaheim Landing".

The meeting as adjourned at 9:50 P.M.

Respectfully submitted,

Bernard Altshuler, secretary

THE HISTORY OF THE

REIGN OF KING CHARLES THE FIRST

IN THE YEAR 1649

BY JOHN BURNET

IN TWO VOLUMES

LONDON, Printed by J. Streater, at the Sign of the Gun, in St. Dunstons Church-yard, 1680.

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BY JOHN BURNET

IN TWO VOLUMES

MINUTES OF THE CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA, August 6, 1957

The meeting was called to order by Dr. King at 7:50 P.M.

Starting off the evening's activities was a talk by George Kanakoff, "Early Mollusca and a New Class". The first part of Mr. Kanakoff's talk was devoted to a review of molluscan history. The five groups of Amphigastropoda, primitive, supposedly extinct molluscs, were briefly described, and representative species from these groups were displayed, in large clear drawings. One of the groups so described and illustrated by Mr. Kanakoff was the Monoplacophora.

In the concluding portion of his talk he discusses some specimens dredged off the West coast of Mexico by the Galathea Expedition in May of 1952. These specimens were described in a paper by Dr. Henning Lemche of Copenhagen as new genus, and new species, Neopilina galathea. Copies of this paper were distributed by Mr. Kanakoff.

The really extraordinary thing about Neopilina galathea is that it cannot be ascribed to any of the present day classes of mollusca. Dr. Lemche places it among the Monoplacophora, one of the ancient Amphigastropoda groups. So there are actually six living classes of molluscs, not five.

It must be mentioned that Mr. Kanakoff, in his talks, has the happy knack of mixing humour with scientific fact, so that we are entertained while being educated.

Following a ten minute intermission, the minutes of the July meeting were read and approved.

Field-trip Reports:

John Fitch - Recently skin-diving at Catalina Island, hunting down juvenile abalone in preparation for a paper on Haliotis. Also in attendance at a sardine conference at La Jolla.

Mr. and Mrs. E.P. Chace - At Morro Bay in June, in quest of geoducks. Also report taking Olivella pycna and Nodiolus rectus.

Rose Burch - Collected in Hawaii, while John Q. Burch slept. Added some Cypraea to her excellent collection.

Mr. and Mrs. Crawford Cates - Also recently vacationed in Hawaii. Noted the abundance of Conus, Cypraea and Mitra in Hawaiian waters. Came back loaded with shells, over 180 different species.

Mr. Homer King - Also at Hawaii, but studying sociology instead of conchology. Enrolled in Rade Culture course at U. of Hawaii.

Dr. W.O. Gregg - Has been making week-end trips hunting land snails for anatomical study. Will reveal more information in his "Confessions of a Snail Butcher" at the next meeting.

The five guests who were with us were introduced by hostess, Bessie Falconer.

Field-trip chairman, John Fitch, promises that group field trips will be scheduled for the fall when tides improve.

New Publications brought to our attention included:

Skindiver, August issue, containing articles by John Burch and John Fitch.

Leaflets in Malacology, published by S.S. Berry, with descriptions of 11 new species by Dr. Berry.

Journal of Conchology from Great Britain.

An Illustrated Guide to Fossil Collecting, by R. Casanova

Rose Burch brought in, for our viewing, some shells of exceptional interest, and a list of collecting stations in Mexico. Also on view were specimens from Cholla Bay taken by Dr. King. in June.

A drawing was held for two doorprizes thoughtfully donated by Mr. and Mrs. Chace.

The meeting was adjourned at 9:30 P.M.

Respectfully submitted,

Bernard Altshuler, secretary

Some Publications Received by J.Q.B.

Notices of New Eastern Pacific Mollusca -I. by S. Stillman Berry
Leaflets in Malacology, Vol. 1, No. 14, July 19, 1957.

A number of new species are carefully described. There are no illustrations, but we understand that they will be figured in another publication before long. It is an interesting lot and I have tentatively assigned several specimens to the new species described. They are:

Pecten (Leptopecten) euternes Berry - 6-10 fms. off Acapulco
Lithophaga (Labis) attenuata rogersi Berry- Cholla Cove, Sonora
" Acmaea" stanfordiana Berry - Pelican Point, Sonora, Mex.
Astraea guadalupeana Berry - Guadalupe Island
Turritella anactor Berry - San Felipe, Baja Calif.
Acanthina tyrianthina Berry- Bahia Magdalena, Baja Calif..
Hanetia macrospira Berry - San Felipe, Baja Calif.
Hanetia capitanea Berry- San Felipe, Baja Calif.
Mitra semiusta Berry- Pt. Conception, Santa Barbara Co., Calif.
Pleuroliria parthenia Berry- Off Islas Tortugas, Costa Rica
Pleuroliria artia Berry- Off Angel de Guarda Id., Gulf of Calif.
in 67 fms.

Basteria- Vol. 21, No.3, Pag. 29-52, 31-VII-1957

C.O. van Regteren Altona: In memorium Ch. Bayer

H.M. van Urk: Een st andschelp van onze kust herontdekt: Spisula
elliptica (Brown).

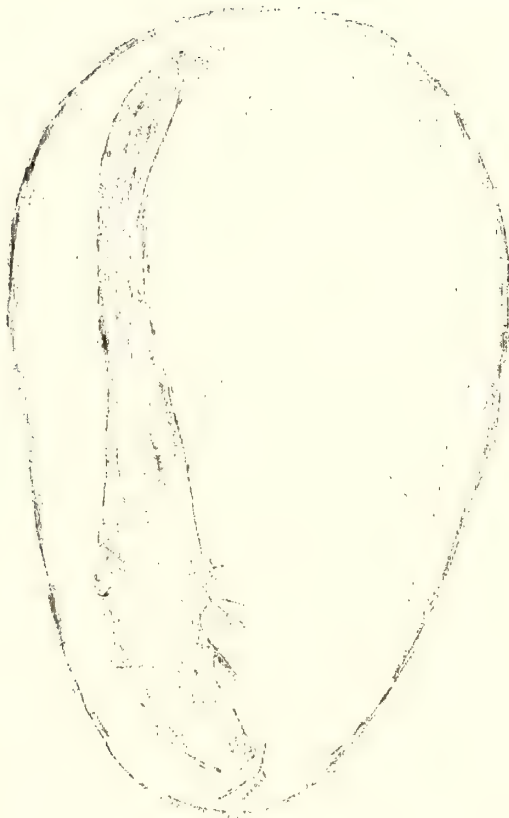
J.J. Frieswijk: A leech-avoidance reaction of Physa fontinalis (L.)

A.C. van Bruggen: New data on recent Mollusca , a critical compilation. 1.

Two New Land and Freshwater Mollusks From New Guinea- By William
J. Clench- Breviora, Museum of Comp. Zool., No.76, June 18, 1957.
4 pp 1 pl. Eustomopsis (Verdichloritis) polingi Clench , and
Westralunio albertsi Clench.

The following note and figure is of interest. It is from Mr. E.P. Chace, Curator of Mollusks, San Diego Natural History Museum.

" Among the oddities that have come to light in the collections here at the Natural History Museum recently is a SINISTRAL specimen of Cypraeolina pyriformis Cpr. It came from the C.E. White collection and is labelled simply local, as were many lots in the White collection. It was not a live shell when collected and there is some sand in the aperture, but it is not badly worn and the 3 plaits on the base of the columella show quite plainly."





Biplex, Triplex, Polyplex, Hexaplex, and other Plexes.

By J.Q.B.

Hexaplex is our latest fad. I received a batch of specimens today that are unquestionably the group we have been calling Ocenebra labelled Hexaplex, but now everything with a spine on it must be labelled Hexaplex sooner or later.

Just for fun tonight I again pulled down a copy of Perry to see, if possible, what it is all about. Perry figured in color paintings on his plate VIII, six shells which he called Hexaplex. Perry was perplexed with plexes throughout Triplex, Polyplex etc., each figuring fantastically different shells. As for Perry's Hexaplex though, the first three shells are rather fair paintings of what we have been calling Homalocantha. His picture of what he calls Hexaplex anatomica is recognizable as a specimen of Murex (Homalocantha) (if you have rather a good imagination). The lower two paintings if presented today might well win a prize as "modern art".

Now to the central figure in this mess. He starts out with "Hexaplex foliacea. Shell white ...". Perry had no idea of locality, but such a minor detail as the seven seas and all the continents being omitted may be overlooked under the name of "artistic licence". So much for that.

Dr. Leo G. Hertlein, a scholar for whom I hold the very highest regard, and whose work to date I have accepted as if they were the "tablets", designated Hexaplex foliacea Perry (Bull. Am. Mus. of Nat. Hist. Vol. 107, p.255, 1955) as the type suggesting that it is a painting of a specimen of Murex chicoreus Gmelin thought by some to be an earlier name for Murex endivia Lamarck. Sally Kaicher has accepted this in its entirety, but has raised Hexaplex to a genus. Dr. Hertlein at least kept it as a subgenus. Therefore, we now have fide Kaicher, Hexaplex chicoreum Gmelin, a neat job of sabotage on everything printed for-lets see- almost 150 years- placing Murex endivia Lamarck in the synonymy.

In conclusion, I have two large boxes containing specimens of Murex endivia Lamarck from many localities. They do vary in form to such an extent that Broderip and others have described forms of it as species. BUT there is no mention anywhere of an "albino" endivia. I have never seen one. Furthermore, not one of probably 400 specimens before me have the spines to compare with this painting. No doubt, I need a course in art appreciation.

Final word.- After having devoted most of my spare time for over a year to a study of the Muricidae, I read a paper at the 1955 meeting of the A.M.U.P.D. at Stanford University titled "A Systematic Outline of the Muricacea in the Eastern Pacific". One statement made in that paper may be quoted here because others had arrived at the same conclusion long before, "It is unfortunate that these characters are not always consistent. One of them will place the species in one group, another in a different group. They merge at times." Since then I have found this statement so true that it is my considered opinion that an attempt to divide the family Muricidae into genera, is certain to enter another contestant in the race with Conus, Cypraea and others to see how quickly it is possible to get every recognizable species into a separate genus.

I beg your pardon.-I started out to review the latest of the booklets by Sally Diana Kaicher, Indo-Pacific Sea Shells, Muricacea, Buccinacea. It really is a nice booklet and well worth while. You need not accept JQB. Booklets now in stock \$1.00.

Publications Received

The Nautilus, Vol. 71, July, 1957, No. 1

List of the Conidae of Puerto Rico by Germaine L. Warmke. A well written distributional list of this genus.

Taxonomy of Salt Marsh Snail, Ovatella myosotis, in Central California

By Edward G. Paulson. From this well prepared study there seems to be little doubt but that we should change our labels from Phytia setifer Cooper to Ovatella myosotis Draparnaud. The species has been questioned by all of us for years. I received several lots from England and could detect no material differences of any nature. However, the new generic name for the species is one that is really new to me. Nevertheless, the author here makes a strong case for it. They are an interesting group obviously forming something intermediate between marine and freshwater and land.

Anatomy of Moellendorffia (Trihelix) eucharistus (Pilsbry) by Tadashige Habe.

New Species of Pontigens From Shenandoah National Park by Leslie Hubricht.

Larger Land Snails of Sleepy Hollow, Kentucky by James E. Conlin.

The Mollusca of Teton County, Wyoming by Dorothy E. Beetle.

Catalogue of the Land Mollusca of Argentina (continued) by J.J. Parodiz.

Types of Mollusks Described by F.C. Baker Part II, University of Wisconsin by Dorothea S. Franzen.

Guy L. Wilkins: An Appreciation by Joseph Ewan

The Journal of Conchology Vol. 24, 26 June, 1957, No. 6.

Lauria sempronii (Charpentier) in the English Holocene by M.P. Kerney.

Pisidium conventus Glessin in Loch Rannoch by S.P. Dance

Notes on Vertigo moulinsiana (Dupuy) in Hampshire and the Isle of Wight- A.G. Davis

Vertigo moulinsiana (Dupuy) in Dorset- A.G. and M.M. Davis

Notes on Pisidium fauna of the Pevensy Levels ...S.P. Dance

Age Determination in Anodonta - T.E. Crowley

Edvardia herbigrada (Pilsbry) in Uganda- B. Verdcourt

Vertigo substriata (Jeffreys) in Herefordshire- L. Lloyd-Evans

A further note on Lymnaea stagnalis (L.) in Anglse- N.F. McMillan

Notes on Dixon & Watson's "Descriptive Manual of British Land and Freshwater Shells" - N.F. McMillan

Glypteuthria capensis: a generic correction- K.H. Barnard

A Molluscan Fauna from Alluvium of the New River at Cannonbury, North London- M.P. Kerney

Large Planorbis vorticulus Troschel near Pevensy, Sussex-S.P. Dance

Types of Cypraea lynx var. williamsi Melvill- N.F. McMillan

Proceedings of the Malacological Society of London, Vol. 32, part 5, August, 1957.

The Habits of Scintillona zelandica (Odhner) 1924 (Lamellibranchia: Galeomatidae) By J.E. Morton. This is a well written and well

illustrated article on a small bivalve commensal on a holothurian.

Some Observations on a mature specimen of Architeuthis from Danish waters By J. Knuden

Six new Molluscan species from alluvium of Hamar near Basra, Iraq

By F.E. Eames and the late G.L. Wilkins

Succinea flexilis from Gough Island- H.E. Quick

Note on the revision of the Turritellidae . J. Marwick

A reclassification of certain Japanese Prosobranchs by T. Habe

Aplysia winneba. Desig. of Lectotype. By N.B. Eales

On the male copulatory organ in Anisus. By B. Hubendick.

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OCT 1957

CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

Subscription \$2.50 per year

We are now meeting the first Tuesday of every month at 7:30 P.M. at the Los Angeles County Museum, Exposition Park, Los Angeles, Calif. All interested persons are cordially invited.

Please mail all news to the editor- John Q. Burch,
1584 W. Vernon Ave.,
Los Angeles 62, Calif.
Telephone Ex 3-5710
Home Ax 2-7965

The efforts of some recent writers to honor minor authors at the expense of ancient scholars who were acknowledged as great minds by their own associates is difficult to understand.

The brief note in Minutes 170, p.13, "Hwass or Bruguere" has resulted in a number of communications, and at least to date, all have been in favor of the assumption that the person's name appearing on the spine of a book was actually the author. In short, most of us seem to be satisfied to accept Shakespeare as the author of the plays that bear his name regardless of counter claims.

The following biographical article by Dr. J.J. Parodiz should be of interest in this controversy.

J.Q.B.

JEAN GUILLAUME BRUGUIERE (1750-1798)

By J.J. Par  diz

Montpellier, a city of southern France, had in the 18th century one of the best and most famous "cabinets" of Natural History in Europe. It was the birthplace of many well known naturalists, such as Rondelet, d'Argenville, Grateloup, and Moquin Tandon, and there Jean Huillaume Brugui  re was born in 1750. In the ancient paths of malacology, as a science in it's own right, we must pause for a moment to consider the exact historic position of that unfortunate man, Bruguiere.

His friends and colleagues said he was very communicative and generously shared his ideas with them. He was able to develop, to great advantage, the system of the Vermes-Testacea which Linnaeus had attempted. Regardless of the fact that his work is considered fragmentary and unfinished, it acquired an extraordinary importance the moment Lamarck and his followers found it necessary to work on it. Geoffroy Saint Hilaire said in his "Fragments Biographiques" that if Lamarck attempted such researches, the invertebrates, which has given him so much fame, it was "only to please and justify his friend Bruguiere". The same author of "Histoire Naturelle des Animaux sans Vertebres" reproduces, in his first zoological publications, many notes that Bruguiere had given to him.

When in 1825, Ducrottoy de Blainville gave to science his "Manuel de Malacologie", using for the first time that word, nor universally adopted for the study of Mollusca, he did not hesitate to acknowledge Bruguiere as the man who had made the largest contribution in his time toward the classification of mollusks in the Linnean system. Thus, Bruguiere appears, already, as the immediate precursor of Lamarck and Cuvier.

He was interested in botany at first. After he obtained his doctor's degree in Montpellier, he moved to Paris in 1773. The same year he sailed with Kerguelen's Expedition (discoverer of the islands which bear his name in the south Indian Ocean) to the seas of the southern hemisphere and Indies. His travels lasted seven painful years, and when he returned to Paris in 1781 he was in very poor health. He began his work on the Vermes-Testacea for the famous Diderot and d'Alembert's Encyclopedie Methodique, which embodied the lights of truth and knowledge of that period according to the newly introduced Linnean system. * It was a master work for that time, and for it Bruguiere used the collections of Mr. Calonne (known as "Museum Calonnianum"); a catalogue of this collection was printed later in London by G. Humphrey in 1797. Humphrey was not a scientist but a business man, and his catalogue turned out so intricate taxonomically that Fischer proposed it deserved to be forgotten, and so it is (Opinion 51 of the Nomenclatural Rules). After the collection was in Humphrey's hands for sale, the only useful remains are Bruguiere's original observations.

* The dates of the publication of the zoological works, from 1789 to 1832, have occasioned several discussions among zoologists. Sherborn (Proceedings Zoological Society, London, 1893:582) partly cleared up the question, but it was necessary for him to make corrections in 1899. Regarding vol. X which comprised the last part of Latreille's Insects and the "Histoire Naturelle des Vers" (1, part 1, 1789, and part 2, 1832 by Bruguiere; 2 by Bruguiere and continued by Lamarck and Deshayes; 3 by Deshayes only), Sherborn said that Bruguiere and Lamarck had nothing to do with vol. 3, which was written by Deshayes, except the article Conus by Bruguiere which

priority of the species is granted to Hwass. Other^y authors have considered each part as a different and independent work. Even if Bruguiere did not participate directly in the second volume, and partly in the third, he was the one who gave the criteria, followed respectfully by Lamarck, and his influence is very noticable later in " Animaux sand Vertebres".

Bruguiere also consulted the great collection of Mr. Hwass from Holland. In the second edition of " Animaux sand Vertebres" (11,1845:4 Deshayes and Milne Edwards said that " all the merit of the descriptions belongs to Bruguiere, regardless that in recent works published in Germany and England, Bruguiere's name is replaced by Hwass .." In honor of the truth, in describing the species of Conus, Bruguiere, himself (Encycl. Meth. 1, part 2:598) said the priority of the species belongs to Hwass; but the tables of specific differences, general observations and additional synonymy are from Bruguiere's hand.** See: J. Bequaert in W.J. Clench, The Genus Conus in the Western Atlantic, Johnsonia, 6, 1942:2.

After the first volume of the Vermes-Testacea was published in 1789, it could not be continued until Lamarck resumed the work in 1791 to 1797. In the bloodiest years of the French Revolution, the Minister Roland asked Bruguiere to participate in a scientific mission to the Ottoman Empire. He did so, but his health was so delicate as a result of his seven years travel with Kerguelen in the southern seas, to say nothing about the worries of the Revolution, that he came back to France six years later very sick, and died on arriving at Ancona in 1798. G.A. Olivier, entomologist of the mission, brought the collections to the Paris Museum; the mollusks were later studied by Mr. de Ferussac for his monumental work " Histoire Naturelle des Mollusques", 1819.

The Conchological Cabinet gathered by Bruguiere was checked by Lamarck, and in 1799 was added to the collections of the Paris Museum. His writings may seem few in comparison with those of other more fortunate authors, but almost all of them have recognized that had it not been for his bad health, Bruguiere would be the greatest of all the naturalists of his time. Paradoxically, those who considered themselves misunderstood geniuses are better remembered than this man who accomplished his work with sacrifice. Reading the Adanson's " Memoires", translated by James Smith, we were surprised at the strong attacks that the French adventurer directed against Linnaeus; Adanson said that Linnaeus was an ignorant and illiterate man! Maybe Adanson had forgotten that he himself invented the most absurd way to name species.*** Bruguiere, instead, without any personal ambition, was working and adding what he considered necessary or convenient to perfect the linnean system, for instance when he created the group Echinodermata or showed to Lamarck the necessity of separating the families of Cephalopoda.

The real historic importance of Bruguiere was his wise influence upon the other scientists who laid the cornerstone of modern zoology in the early 19th century. Before Lamarck, there did not exist any definite group in the sense of family, although those named " g " genera" by Cuvier were larger units with characteristics of families. When Lamarck introduced this category into zoology, he was indeed following Bruguiere's point of view. All of the authors who have studied the history of classification in malacology have recognized this fact. As recently as 1936 Lammere wrote (Mem. Musee Royal d'Hist. Natur. de Belgique, 2nd serie, 3) that if Lamarck admitted the phylum Mollusca he did so upon Bruguiere's criteria. The way was open to Cuvier who established the anatomical classification,

a revolution in zoological theories.

***-----
 *** Adanson needed to find scientific names for a number of forms and followed the advice of his not less "clever" colleague, Guetard: placing some dice with printed letters into a box, and after shaking it, he took letter by letter forming nonsense words; thus, names like Ostrea "gascar" and many others which mean nothing were born, and they are still in nomenclature! It is true that the Rules of Nomenclature today except words formed arbitrarily (article 8 K), but this device was seldom used even by the less serious authors. It is easy to see that Adanson's intention was to ridicule the Linnean system, doing that at the same time the 10th edition of "Systema Naturae" was issued,

Walter Freeman Webb 1869-1957

Few men in the history of conchology have contributed as much as Walter F. Webb.

It is doubtful if any dealer ever had as many fine specimens pass through his hands.

As friendly competitors our correspondence continued steadily throughout the years.

At the time he was preparing the first edition of his Handbook For Shell Collectors, I sent numerous cuts to him and we exchanged numerous letters.

In nomenclature Mr. Webb was a conservative, and had the courage to simply ignore the work of those who sought to replace the long established classifications with fanciful names of their own. Later and more scholarly work has proven him to be right in most such instances.

We had many a laugh from Mr. Webb's letters. He enjoyed the privilege of being an independent merchant. He selected his own customers. It was not unusual to receive a letter from him about as follows- "Here is a customer for you if you want her. At my age I prefer to deal only with amiable people." Some of them proved to be all right. Others gave us a yearning for those "amiable people".

John Q. Burch

The following is from the obituary notice in the St. Petersburg, Florida, newspaper.

"Walter F. Webb, Shell Expert, Dies at 88"

Walter F. Webb, 88, famous naturalist, died yesterday in a local hospital. He is said to have owned the largest collection of shells in America-100,000 specimens of 12,000 species which he gave to Chicago's Field Museum. He came here in 1946 and lived at 2515 Second Avenue North. He had been a frequent winter visitor here previously from his native Rochester, N.Y. Mr. Webb's books took the name of St. Petersburg to many countries, for the Ideal Printing Co. here printed most of them. In 1934 he helped found the Shell Club here which yearly holds one of the largest shell shows in the world. The Smithsonian Institute furnishes the top award. Letter of Praise- Within the last month Mr. Webb had received a letter from the Philadelphia Academy of Natural Science. It said " - You have done more than anyone else in the last 100 years to increase the popularity of conchology (study of shells)." Con.

The letter cited Mr. Webb's letters to novices, his sale of collections to museums and collectors, and especially his books for that achievement. Among his books is the world renowned "Handbook for Shell Collectors." During World War II the Navy bought 5,000 copies of the "Handbook" and placed them in every ship and shore station library. Mr. Webb's enthusiasm for collecting dated from his early teens when he collected bird's eggs in Rochester and developed a business of selling the eggs to other collectors. Changed Hobbies- In 1893 he took his egg collection to the World's Fair at Chicago and displayed it alongside the shell collection of another youth. Unusual interest shown by fair visitors in the shells led Mr. Webb to change hobbies. During the next 40 years he bought some 25 collections of shells paying up to \$75,000.00 each for some. In 1910 he visited Deland, became interested in Rollins College there and supplied most of the shells for exhibit at the Rollins Beal-Maltbie Museum.

Mr. Webb also collected coins and was successful in the nursery business in Rochester. He was a member of the First Presbyterian Church here.

Survivors include a daughter, Mrs. Ruth Webb Lee of Framingham, Mass. who is an authority on antique glass; a brother, Fred, of Barker, N.Y.; two sisters, Mrs. Clara Haight, of Olcott, N.Y., and Mrs. Florence Triscott, of Springwater, N.Y., and two grandsons, Robert W. Lee of Natick, Mass. and Everett Lee of Cincinnati. "

The following is from a personal communication from Mr. Webb's daughter, Mrs. Ruth Webb Lee.

" You asked about information for an obituary. As my father may have written you, he aimed to live to be 100. He had never been ill in his life until the doctor ordered him to the hospital on June 3rd. He was to have a comparatively minor operation, but he had let the situation go too long and so they could not operate until the 12th. He was coming along nicely and, in fact, I believe he could have gone home the day he passed away, but his heart gave out. The nurse said he was up between 5 A.M. and 6 A.M. and as he started to get back into bed she noticed he was turning blue and tried to give him some oxygen, but it was too late. He had just passed his 88th birthday. We had so many plans for the fall and it did seem too bad that he could not have gone on until after I had settled down there because he looked forward to it so much. Since I am the only child, everything was left to me. I can say that I plan definitely to keep on publishing his books."

Charles D. Nelson of Grand Rapids wrote a short time ago that he had given his extensive collection of fresh water mussels to Michigan State University. The collection consists of better than 65,000 specimens with some 700 species represented. The collection is arranged according to river systems.

It is always a pleasure to hear of a fine collection going to an institution where it will receive proper attention.

We have just learned of the death of Mrs. Lee Woolacott of N.S.W. Australia. She died suddenly on the 14th of August, 1957. Mrs. Woolacott was one of the most active and enthusiastic of the group in Australia. Her large collection consisted of better than 8,000 species we are advised. We do not know of any plans for the collection.

Discord Among The Experts

By John Q. Burch

Perhaps a more appropriate title would be "Apology for Criticism". If I have been guilty of being hypercritical, please accept my sincere regrets, and be assured that I may disagree with some of the work of those whom I hold in the highest regard.

Whether or not such discussions are of any genuine value is a fair question. It has seemed to me that there are certain things that should be said by some one, and those more eminently qualified refrain even when agreeing personally "off the record".

The professional scholar who thinks that the criticism of systematic confusion is coming from the amateur naturalist is in error. Very few amateur collectors have studied enough systematics to be capable of making a proper objection, and it is safe to assume that more than 99% of systematic publications are by professional workers.

The professional scholar whose problem is in another field is the source of the loudest complaint. The research worker who long ago earned his Ph. D. , and to whom a mollusk is incidental to his problem in biochemistry, radiation, parasitology and a host of others may call at our store for a book of classification.

When my reply is to lay three or more recently published books before him, each written by a recognized doctor, and each giving a different name to the same species, some of the comments should be preserved for the record.

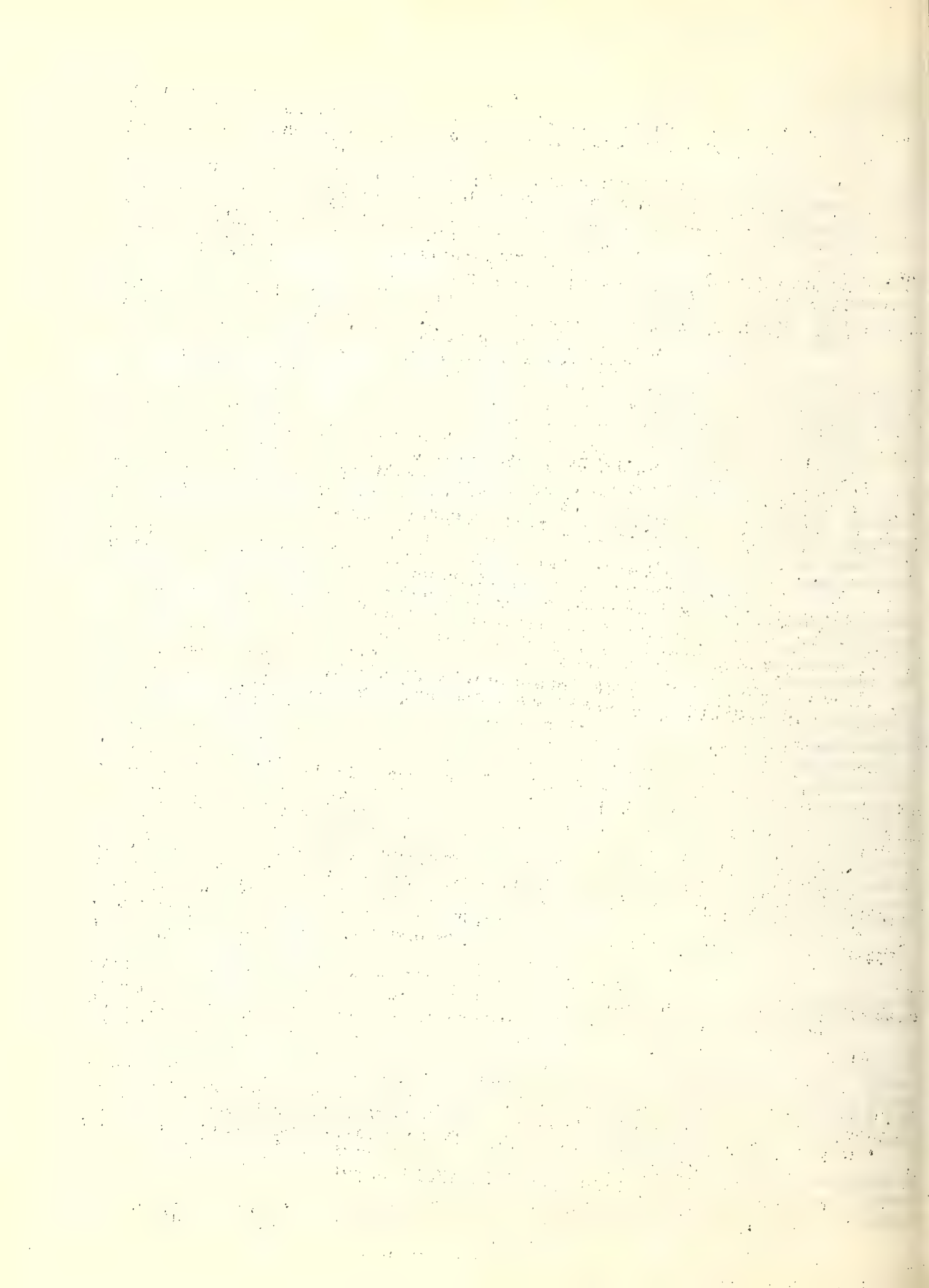
A typical example of hundreds might be the name of the beautiful Spondylus from the Gulf of California. When asked the correct name a few days ago, I laid three publications on the counter, all recently published, available new. One leading professional gives us Spondylus princeps Broderip, 1833 , another favors Spondylus pictorum (Schreiber) 1793, and the third prefers Spondylus crassi-souama (Lamarck), 1819. In this case there is no question of the species nor the genus. We simply have three names for the same animal. But this is a mild mixup. There are others in which the same species is given many more names and assigned to different genera depending upon whose book you prefer to follow.

Museum Boltenianum, 1798

The International Commission specifically made this work nomenclatorially available- Opinion 96.

The fact is that a large number of the leading writers, and particularly those of Europe, refuse to accept these names. They do not ignore Opinion 96, but simply state that they consider it nonsense, and proceed happily to use the name of Lamarck or some other and place the Bolten-Roding name in their synonymy.

We are well aware of the fact that defiance of civil laws can but result in anarchy. Apparently systematic zoology is concerned with rather a large segment of rebels.



Necessity for Legal Training as Prerequisite for Zoology

All lawyers know that it would be possible to write a code of laws so simply that any educated layman could understand them, and probably provide true justice in more cases than the present million or more volumes. However, if such a disaster should occur, we would no doubt need one court instead of fifty, and what would the host of attorneys do for a living?

I am now looking over the impressive file of publications of the International Commission of Zoological Nomenclature, and realize that when they have covered a small percentage of the problems now pending, we will be in need of the same huge tomes of extensive digests now the familiar tool of all lawyers.

It would seem that before long at least two years of legal training should be required before permitting a student to examine an animal.

In any event the student who becomes a professional zoologist will be obliged to spend far more time studying the taxonomy than he can spare for serious consideration of the animals involved.

Conflict of Interests

Is it possible for one system of zoological nomenclature to be workable in all groups of life? Does not the specialist in bees and ants for example occasionally meet rules of systematics that may seem ridiculously impossible to him although perhaps perfect for the specialist of birds or snakes? The worker with mollusks may need categories that are of value only to the malacologist.

Would not a special commission for all major groups be an advantage?

Of course, the obvious matter of compensation intrudes itself into any such a discussion. Any one of us could select a desirable supreme court to pass on all such matters, but these men or women should be of the very highest calibre. They would have no time whatever for their present research and duties. They should expect a minimum of \$15,000.00 to \$20,000.00 per year. We will pass this along to the finance department.

The other alternatives seem to be a selection from those who have nothing else to do, or possibly one or two who already "have it made". I fear that the last mentioned group might confuse us even more than we are if that is possible.

Need of Agreement

The title above is the understatement of the day. We semi-amateurs have no intention of being super critical of the serious work of any research worker. If, indeed, we should have the extensive library needed, few of us would think of taking the time and patience to attempt to determine which one of several is nearer correct.

We feel justified in complaining when names in constant use by a host of writers for a century or more are summarily discarded, and worse yet, usually with little or no explanation for having done so.

New Publications

Pliocene and Pleistocene Fossils From the Southern Portion Of The Gulf of California By Leo George Hertlein.

The title might indicate to the casual reader that it probably has little bearing on the Recent fauna. However, Dr. Hertlein has given a very interesting analysis of several confusing groups, including a discussion of the synonymy. -- Bulletin of the Southern California Academy of Sciences vol. 56, Part 2, May-Aug., 1957.

Shells of New Zealand by A.W.B. Powell- Third and enlarged edition 1957. 202 pages, 36 plates, text figs. This is a revised and much more elaborate edition of his well known and excellent work called "The Shellfish of New Zealand".

This work combined a great deal of information with a complete check list. I suggest that it be used as a model by workers in other provinces. References are given for each species, generic names appear with the type species in parenthesis. The earlier editions have been out of print for several years and has been in demand on the used book market.

Now in stock and available from John Q. Burch- Postpaid \$4.00

Patelloplanorbis, A New Genus of Planorbidae (Mollusca Pulmonata) By Bengt Hubendick- Koninkl. Nederl. Akademie Van Wetenschappen- Amsterdam, 1957.

This is quite an amazing animal. The plates are clear, and if seen without the explanations, excellent anatomical figures, most of us would think that we had a photograph of a species of one of the Calyptraeidae. The most conservative of conservatives would announce that a planorbid limpet is entitled to a special place in the system.

Observations on the Occurrence of Oncomelania quadrasi Mollendorff, the Host-Snail of Bilharzia in the Philippines by Bengt Hubendick From Proc. XIV Inter. Cong. of Zool., Copenhagen, 1953- 1956

On the Occurrence of Aplysia dactylomela and Aplysia oculifera in South Africa by William Macnae- So. Afr. Jour. Sci. vol. 53, June, 1957- This is a well written paper with carefully described anatomical character distinctions.

Macrochlamys aufschnaiteri bon. spec. Von Werner Blume Opuscula Zool. Eine bis unbekannte Unterart von Pomacea bridgesi Rve. Von Werner Blume- Opuscula Zool. Munchen- 15 Mai., 1957

Assiminea (Crosilla) salomonensis n.sp. By Hans Friedrich, Munchen Arch. Moll. Band 86, 1957

Notes Sur Les Limaces par C.O. Van Regteren Altena - Journ. de Conchyliologie vol. XCV, 1956 p.89 -99

Notes sur les Limaces- 2. Description d'une espece nouvelle de Gigantomilax provenant des environs de Kouldja (Chine) par C.O. Van Regteren Altena Beaufortia - Zool. Mus. Amsterdam, Mar. 1954

Outdoor California- Publication of the California Dept. of Fish and game Vol. 18, No. 7, July, 1957 is devoted to a well illustrated article entitled "Gordon Calls Pollution Laws Inadequate". Two specimens of the Haliotis are shown pointing out the damage to shell life. Other impressive photographs of dead fish etc. are of interest.

The paper is well written but it seems that pollution is something like sin. Everybody is against it, but doing something is another matter. Some one might even start with the Potomac in the nation's

MINUTES OF THE CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA
September 3, 1957

Dr. King called the meeting to order at 7:30 P.M.

Leading off the events of the evening was a talk by Mr. Crawford Cate on Volutes. Mr. Cate presented a thorough history of the taxonomy of the Volutidae; and a summary of the distribution of Volute genera throughout the world. He illustrated his talk with many fine shells from his collection.

John Fitch discussed a paper, "Micronesian Reef-associated Gastropods" by Demond, recently appearing in Pacific Science Quarterly. Mr. Fitch praised this article for its wealth of ecological data and collecting notes, and suggested it as worthwhile reading for all shell collectors.

Other new publications were brought to our attention by John Fitch and by John Q. Burch.

George Kanakoff moved that our organization accept an invitation to join the American Association for the Advancement of Science. This motion was seconded by Crawford Cate, and passed unanimously by the members present.

Mr. Kanakoff gave us an interesting report on some recent entymological collecting he has done on the Channel Islands.

Field-trip Chairman, Fitch, reported on tentative planning of a local collecting trip in November, and a more extended trip to Baja California pending completion of a road now being built south of San Felipe.

The meeting was adjourned at 9:20 P.M.

Respectfully submitted,

Bernard Altshuler. Secretary

1. The first part of the paper discusses the importance of maintaining accurate records of all transactions.

2. It then goes on to describe the various methods used to collect and analyze data.

3. The third section deals with the results of the study and the conclusions drawn from them.

4. Finally, the paper discusses the implications of the findings for future research and practice.

5. The paper concludes by emphasizing the need for continued research in this area.

6. The author expresses his appreciation to the many people who assisted him in the completion of this work.

7. The paper is published in the Journal of Business Administration, Volume 10, Number 1, 1968.

8. The author's address is 123 Main Street, New York, New York 10001.

9. The paper is available for purchase at a price of \$5.00 per copy.

10. The author can be contacted at 123 Main Street, New York, New York 10001.

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CONCHOLOGICAL
CLUB OF SOUTHERN
CALIFORNIA

Subscription \$2.50 per year

The next meeting will be our annual Christmas Party. This year we will have dinner at the Los Angeles County Museum in the museum cafeteria. Dinner will be served at 6:30 P.M. on Dec. 3rd. A turkey dinner will be available at \$1.50 per plato. Please make your reservations with Mrs. John Q. Burch, 4206 Halldale Ave., Los Angeles 62 or telephone Ax 3-5710 or home Ax 2-7965.

There will be no regular program other than our annual social meeting and exchange of Christmas gift shells.

Please mail shell news to your editor- John Q. Burch,
1584 W. Vernon Ave.,
Los Angeles 62, Calif.
Phone Ax 3-5710
Home Ax 2-7965

If you have failed to register for the 1958 issue of the Directory of Conchologists, this is the last call.

The following is a summary of an address given at the meeting of the Conchological Club of Southern California, Nov. 5, 1957.

The talk was illustrated with drawings and charts, many sets of actual specimens, and books.

TAXONOMIC CONFUSION IN CONIDAE

By John Q. Burch

The purpose of this short paper is certainly not to attempt another systematic arrangement of the group we know as the Conidae. A bibliography of the work of a host of scholars far more eminently qualified would fill a substantial volume. It is an interesting fact that no two of them seem to agree. Each new paper apparently adds to the confusion.

May we ask whether or not our present knowledge of these animals is sufficient to warrant a division into genera or subgenera? Those who are in the well known group - "My mind is made up - Do not confuse me with facts", are invited to merely pass over these queries.

J.R. LeB. Tomlin in his Catalogue of Recent and Fossil Cones, Proc. Malac. Soc. London, 1937, listed a vast number of species indicating the synonymy of many. However, it is difficult to determine the identity of many of these if not indeed impossible. The beauty of the shells made it one of the most popular groups to collectors from the most ancient times. The result was the description of many species by the early pre-Linnean authors. Most of these were illustrated by wood cuts showing few diagnostic characters, brief and inadequate Latin descriptions, and with rare exceptions no locality data. Authors from Linnaeus to date refer to these old works. The confusion of the species involving simply countless controversies is easily appreciated.

A great many species have been described by post-Linnean authors by the simple expedient of referring to one of these old figures and giving it a binomial name. The fact that the figure might well serve to identify many related forms is not considered. As a dealer in antiquarian books I have found that it has been the custom of former owners to write their idea of the correct Linnean species under the old figure. It is necessary to add that able conchologists have made some surprisingly different guesses? As a matter of fact some authors are to this year trying to dig still more puzzles out of these tombs.

For your consideration you will find on the table a number of the works of the pre-Linnean authors. The art work in these wood cuts is excellent. We appreciate them, but the characters we wish to study now are simply not apparent. Nevertheless these figures before you form the very foundation of molluscan taxonomy.

Hanna and Stron in West American Conus, Calif. Acad. Sci., 1949, give an excellent brief review of the literature.

We have before us a representative collection of shells of the Conidae. Our first systematic arrangement into so called genera or subgenera will follow the plan of one writer. I propose to move these shells all over the table following the work of various authors using different characters for classification. I hope that it will be entertaining, because I am certain that it will be confusing.

It should be mentioned that the genotype of the genus Conus is a controversial matter. Clench in Johnsonia followed Iredale and others in accepting Conus litteratus Linne! designated by Swainson, 1840. Hanna and Stron, Myra Keen and others have accepted Conus marmoreus Linne', designated by Children, 1823.

We accepted Conus marmoreus Linne', but this is beside the point here. it is obvious that one species is coronated and the other is not. The use of one of them as the type species would necessarily produce a very different arrangement than would the use of the other.

Bernard C. Cotton in A Catalogue of the Cone Shells (Conidae) in the South Australian Museum, Rec.So.Aust.Mus., 1945, published a scholarly attempt to subdivide this group. His arrangement will do to start. Bear in mind that Cotton used Conus litteratus Linne' for the genotype of Conus s.s.

Sally Diana Kaicher in her recently published booklet on the Toxoglossa has obviously accepted Conus marmoreus Linne'. Robert Robertson in 1954 suggested some possible subgeneric names for our West American species.

Dr. Kuroda, dean of the conchologists of Japan, has helped us by accepting the multitude of genera, adding others, and then adding subgenera to all.

There is nothing new in this attempt to divide the genus Conus. It is apparent that the authors of a large part of the names described them over a century ago, Swainson, Montfort, Morch and others. Only the revival of these schemes in recent years and in this year of 1957 cause us to also revive the conclusion of almost all serious specialists to date, namely, that a division of the Conidae based on shell characters alone can but lead to confusion because the characters merge into one another.

The sets on the table are accompanied by little scrolls showing which generic name to give it when using the work of various authors. The absurd disagreement is apparent. It seems that pertinent studies should include the work done on the radula and anatomy, the ecology, and the protoconch of the individuals considered.

We will first consider the radula.

The Radula

Recent literature is prolific with radular studies. The value is beyond question. We have a large collection of mounted slides of radulae containing those of most of the species of this coast. The variation in some species is so great that to figure the radula of one individual would be quite misleading. Some years ago the embryologists thought that they had solved all of the secrets of creation.

Let us not make the same error. It is suggested that we study the radula as another character rather than the final conclusion.

The comments of R.K. Dell in "The Archibenthal Mollusca of New Zealand Wellington, 1956" are in point. Dr. Dell stated: "Thiele...used the radula consistently in classifying the whole order of Gastropoda. Subsequent work has modified Thiele's framework and to a greater extent the details of his classification, as the radular details of many additional forms have been determined and described. No extended study appears to have been made, however, as to the variability of the radula on a large scale....It has been the writer's experience that in a group where other characters are variable, the radula is often just as variable, often within wide limits. Austrofusus and Penion provide good examples against accepting the evidence of a single radula, and details for both of these genera are given...In Austrofusus, for example, of ten specimens obtained in the same haul of the trawl and outwardly indistinguishable, one specimen had four cusps on the central tooth, seven had five, and two had six. These obviously do not represent unusual or individual aberrations."

Dell continues "There can be no doubt that the radula is a useful systematic character, but it must be used as one source of evidence in conjunction with all other available characters"...."The position may be summarized with the statement: No two species with markedly different radulae should be considered congeneric unless the weight of all other evidence indicates otherwise." End of quote.

If minor anatomical differences are of systematic importance, then we may well start with Homo sapiens. The government has entire buildings full of our finger prints. No two of us are identical.

The teeth of the radulae of the Conidae offer an exceptional study. To appreciate the peculiarities of the forms to be considered it is necessary to bear in mind that each tooth consists of a plate of chitin rolled up like a paper spill, and that the teeth are detached from the radula one at a time and employed singly by the animal, projecting from the tip of the muscular proboscis.

There have been a number of beautiful and scholarly works published in this field and not all of them in recent years. Troschel in Gebiss, part 2; figured 8; Bergh in Beitrage zur Kenntniss der Coniden, 1896, describes and figures the radulae of 31 species. Thiele in Handbuch der Weichtierkunde figures the teeth of 5 species. Several books are on the table for the inspection of those interested.

The article by Lieut.-Col. A.J. Peile is of great interest because he attempted a division based on the teeth alone and has them well figured. His paper was published in Proc. Malacological Society of London, Nov., 1939, pp. 348-356. It is to be regretted that Peile did not name his groups. Had he done so, his names would seem to some of us to form a more logical division than any suggested to date. However, there can be no doubt but that he had some excellent reasons for not having done so.

I am greatly indebted to Mr. George Kanakoff of the Los Angeles County Museum for the excellent drawings on the four large charts before you. They are examples of the radular teeth to be found in certain groups of species of the Conidae.

The Arrangement of Peile

Peile divided the species into groups by radular teeth.

1. The forms distinguished by their length of which the simplest is "Conus geographicus Linne' in which the base is not much more solid than the long cylindrical shaft. The point is armed on one side with a small barb, and on the other with a blunt ended blade."

Please note that the tooth of Conus tulipa Linne' is very similar, barbed blade and strong serration. Peile's figures #1 and #2. The two species are obviously very close in shell characters as well. Young specimens are frequently confused. Nevertheless, please note that we have Rollus geographicus, Gastroidium geographicus, Tuliparia tulipa and others to your taste.

2. Group No. 2 of Peile is that of Conus monachus Linne. Fig.3, the shaft is cylindrical with a simple base and no serration; the armature consists of a large barb and a large barbed blade, together with a long backward-pointing process with a recurved tip. Here belong Conus catus Brug. and Conus striatus Linne'. Incidentally, there is a beautiful figure of a tooth of Conus striatus Linne' in Johnsonia, No. 6, p.2. Alan Kohn showed the motion pictures at the Oct. 2, 1956 meetin of this organization in which both of these species attacked and devoured the same species of fish. It is certain that they have the same ecology. It is of passing interest that Peile in 1939 grouped them together on radular characters.

Nevertheless, Cotton, Kaicher et al. place Conus catus Brug. in Chelyconus with genotype Conus ranunculus Brug., and Conus striatus Linne' in Dendroconus of which indeed it is the genotype. Thiele helps out by giving us another name, Strioconus Thiele, also with Conus striatus Linne' as the genotype.

Peile places Conus purpurascens Broderip in this group. Note Fig. 6- While this is not a radular tooth of Conus purpurascens but of a species from Mauritius. it illustrates the type of tooth discussed in all species of this group. Fig. 4 of Conus andamanensis Smith from Port Blair is in this group although the shaft is shorter and more swollen, the blade is absent, its place being taken by a minute cusp near the base of the long process. It is difficult to see and on the reverse side of the specimen as figured. Note his figure no. 5. Cotton et al. place this Species in Chelyconus. Peile also places provisionally in this group although stating that they are probably not closely related- "...inscriptus Reeve (fig.7), in which the place of the blade is taken by two barbs. Conus californicus Hinds (fig.8) with, in addition, two barbed processes further back on the other side. Incidentally, Hanna and Strong in West American Conus have a figure on page 310 of a tooth of this species showing exactly the same character mentioned by Peile.

Nevertheless, please note that our authors of genera have Conus inscriptus Reeve in Pionoconus Morch with genotype Conus magus Linne'. Conus californicus Hinds in Cleobula with genotype Conus figulinus Linne', or in Chelyconus with genotype Conus ranunculus. There are several others.

3. Peile states "In a third group, that of textile Linne' (fig.9), the base and shaft are similar to those of monachus, but a backward pointing spur protrudes from the shaft at about one-seventh of its

length from the base...The tip of the finely serrated shaft has a barb and a pointed blade."

"Similar teeth are found in Acuminatus Brug.(fig.10), amadis Gmelin, aulicus Linne', dictator Melvill, episcopus Brug., and omaria Brug. Somewhat similar are nicobaricus Brug. and marmoreus Linne' (fig.11).

This is really a shuffle with authors placing C. acuminatus in Lentoconus, C. aulicus in Regioconus, Cylinder and others, C. Textile in Darioconus, Cylinder and others, C. nicobaricus and C. marmoreus in Coronaxis seemingly without end so why continue?

Peile groups "two species with rather weak serration and well developed spur. These are virgo Linne' (fig.12) with a curved shaft and barbed blade, and terebra Born, which is similar but the edge of the blade is blunted. C. princeps Linne' is somewhat like virgo but shows a blunt spur, stronger serration, and a smaller cone; it might be considered a link between virgo and vexillum. (fig.13). We may now place Conus virgo Linne' in Virgoconus or Lithoconus, Conus terebra in Hermes or several others; Conus princeps Linne' in either Stephanoconus with genotype C. regius or in Conus s.s. or others if you prefer.

Peile states "In th group represented by vexillum Gmelin (fig. 13) the shaft is moderately long with strong serration, the barb is minute and the blade bevelled..." Here belong ermineus Born, monile Brug., rattus Brug., striatellus Link, and summatrensis Brug. Near vexillum, but with weaker serration and a blunt spur are capitaneus Linne' and patens Sowerby. Conus consors Sowerby with a barbed blade may be placed here. Conus anemone Lamarck and C. maculatus Sowerby with the blade somewhat barbed seem to be near vexillum. Finally of the long shafted forms there are two species with blunt-ended blade and no serration; they are lividus Brug. (fig. 15) and flavidus Lamarck.

Please observe the data on the specimens before us. Authors have distributed the species of this group through such genera as Floraconus, Dauciconus, Leptoconus, Lithoconus, Pionoconus, Rhizoconus, Stephanoconus, Virgiconus and others.

Peile states "In Conus ebraeus Linne' (fig. 16) there is neither barb, blade nor serration; Conus chaldeus Roding is similar. Authors have these in Virroconus, Stephanoconus and others.

Species with weak serration include Conus novaehollandiae A. Adams (fig.18) and Conus aurora Lamarck (fig. 19). Conus aurora Lamarck is placed in Textilia, and Conus novaehollandiae is placed in Floraconus incidentally also in synonymy of Conus anemone Lamarck, discussed above. It is apparent that some of them are in error.

Most of the remaining species may be arranged by the radular teeth into two groups, A and B, with each group divided in two.

A. Serration not longer than the blade

1. Blade without a barb

ceylanensis Brug.

coronatus Gmelin

judaus Bergh

1. Blade without a barb (cont'd)

mediterraneus (fig.22)
miliaris Brug.
planorbis Born
pussilus Lamarck
spongalis Brug.
taeniatus Brug.
tessulatus Born. (fig.23)

2. Blade with a barb

arenatus Brug. (fig.24)
pulicarius Brug.
revianicus Gmelin (fig.25)

B. Serration longer than the blade

1. Blade without a barb

figulinus Linne'
gladiator Brod.
mus Brug.
mutabilis Reeve
tinianus Brug.
miles Linne' (fig.26) (with incurved blade)

2. Blade with a barb

litteratus Linne'
millepunctatus Lam. (or C. leopardus Born if you care to
resurrect the pre-Linnean)

The tooth of Conus imperialis Linne' (fig.27) is remarkable for its solidarity and for its formidable armature.

A somewhat similar form is found in Conus nussatella Linne'. (fig.28) Conus regularis Sowerby is included here on account of its basal cone. It has fine serration, but the double barb in place of a blade recalls the armature of C. inscriptus (see fig.7 supra.). Finally two species are included here, solely on account of the general form of the tooth; the bases, however, do not appear to be furnished with the cone found in radulae of a similar type. One of these is C. nobilis Linne' (fig.29) with a slightly pointed blade opposed by serration; a process near the middle of the shaft suggests a blunt spur (compare Troschel's figure of pulicarius). The other is C. distans Brug. (fig. 30) in which the blade is opposed by a granular ridge; behind the latter is a peculiar leaf like fold, for which it is difficult to suggest a function.

Inasmuch as the above species are no doubt distributed by authors into a great many of their various genera, it would be a boresome repetition to continue in detail. The specimens are before us.

It should be mentioned that Hanna and Strong in West American Conus have given some excellent figures and discussions of the radular teeth of a number of species such as Conus princeps, ximenes, virgatus, and others. Incidentally, they did not divide the genus Conus.

The Gastropod Protoconch

One year ago, at the Oct., 1956 meeting of this organization, my paper was devoted to a consideration of different types of the gastropod protoconch and exemplified by a series of specimens. The value in classification was discussed, and some of the problems involved. Many writers have published varied views regarding the importance of this character.

By way of introduction to further study, I wish to read two of my adopted conclusions in the Oct. 1956 paper.

"While it is true that some specimens may be assigned to a proper genus based on the protoconch, there are many rather puzzling problems involved. The value is rather genetic than generic. Some very different shells will have almost the same protoconch, and some very similar shells will vary greatly in this character. The protoconch is formed in the egg of the mollusk, and the conclusion is that it proves a common ancestral form. For example, Eusinus, Purpura, Melongena, Busycon, and many others are genetically related, but not as we see them generically."

"However, it should be stated here that if you have a specimen showing many of the morphological characters of a familiar genus, but having a very different protoconch, it is almost certain that it does not belong with them, and one more step is taken by the process of elimination."

This conclusion is both supported and rejected by numbers of eminent scholars.

Having quoted Dr. W. H. Dall extensively in his work with the protoconch, it is fair to add that toward the end of his life, after having been a lifelong advocate he recanted in 1924, stating "So many preposterous combinations of unlike things and separation of similar things, that I have come to the conclusion that this view cannot be maintained"

Dall, W.H., 1924 "On the value of nuclear characters in classification of marine gastropods, "Journ.Wash.Acad.Sci. 14:177-180. In reply to this statement, Dr. R.K. Dell, 1956, states "There seem to be two viewpoints from which the importance of the protoconch is attacked. Dall, Laswerson (1954, p.140), and others appear to argue from the viewpoint that strict reliance on the protoconch separates similar forms. But how is it determined that the forms are similar? Every systematist can cite examples of convergence in characters. Must one first decide intuitively that forms are similar and therefore that nuclear characters are useless if they do not conform? Strict conformity with the rule, "no two species whose protoconchs are radically different can be considered congeneric" has sorted out many difficult groups in Australasia, and subsequent additional work in most cases confirmed such preliminary splitting. "Dr. Dell then mentions some cases in point. End Dell quote.

Lemche in 1948 in his work, "Northern and Arctic Tectibranch Gastropods- I The Larval Shells, II a Revision of the Cephalaspid Species",

1. The first group of people who are interested in the study of the history of the United States are the people who are interested in the history of the United States.

made the surprising statement that two different types may occur in what is apparently the same species, Diaphana minuta. Lemche concludes "In some cases a single species may develop two different types of apex according to environment, and one species cannot be placed in two different genera." This statement has been extensively quoted and seemingly also extensively misunderstood. We have a copy of the work before us, and if interested, it will be apparent that the difference is in size and coiling rather than a complete difference in structure.

Nevertheless, this scholarly treatise supports my statement made above that the protoconch should be studied as another character rather than the final answer, if indeed there is a final answer.

Terminology

A glossary of terms used in the study of the early whorls of gastropods would, unfortunately, be compelled to give several definitions of the same part as used by various authors. It would seem logical to accept the work of L.R. Cox in his paper in the Proc. Malac. Soc. Lon., 1955, "Observations on Gastropod Descriptive Terminology", or some other uniform system. We have a copy of this work before us for the consideration of those interested.

Protoconch- "Those initial whorls which either differ in altitude, outline or ornament from the succeeding ones, are clearly demarcated from them by a varix or other evidence of growth interruption, or (when their limit is not so sharply defined) differ from them in the absence of ornament."

Nucleus- "...for the very earliest formed part, at the origin of the spiral."

Teleconch- "the part of the shell formed subsequent to the protoconch."

THE EARLY WHORLS OF THE CONIDAE

The nucleus of the protoconch of this family is a very unsatisfactory character to study being small, simple, smooth, rounded, unsculptured, and of few whorls. In almost all adult specimens the nucleus is eroded to an extent that characters if present have been erased. The needed juvenile specimens are to be seen in very few collections, and then of a limited number of species. Hanna and Strong in "West American Conus" state "Evidently good specific criteria are present, not only in these earliest whorls, but also on several of those which follow. In many species the shoulder bears a row of closely placed beads on the early whorls. This is a character which persisted throughout life in most of the western Eocene species, but in the living forms it was lost by mid-growth or earlier." "This row of beads is not morphologically related to the coronal spines which decorate some of the living forms."

Burnett Smith published a paper in 1930, Proc. Acad. Nat. Sci. Phil. "Some specific criteria in Conus". We have a copy of this work before us.

Smith divides the early whorls of Conus, referring to the entire group as the "Apex" in his terminology.

In order of their appearance--

1. A smooth and rounded stage
2. A rounded stage with fine ribs of rib-like growth lines (curved rib stage)
3. An angulated and noded stage (noded stage)
4. An angulated and keeled stage (keeled stage)

The first and probably most of the second should be regarded as larval and assignable to the protoconch. The third and fourth are pretty clearly referable to the teleconch.

The first stage is present in sufficiently good specimens, though it may cover few or relatively many whorls.

Smith made a detailed study the subsutural flexure stating: "The subsutural flexure in Conus, unlike the 'apex' is almost always manifest. It shows as a striking backward bend of the growth lines, being most conspicuous in the region between whorl angulation and suture." "These morphologic characters are relatively constant in any one species and quite tangible. They compare favorably with most criteria of specific determination."

"Two types of (subsutural flexure) can be distinguished in Conus. One of these is curved above the whorl angulation and appears to be prevalent throughout the genus. In contrast, the second or angulated type of flexure seems to be rare in Conus. A possible employment of the subsutural flexure in subgeneric grouping must await further study."

Dr. Smith's suggestion of "further study" inspired an examination of the limited number of young specimens of Conus available. They were not numerous, but the several hundred specimens studied convinced me of two things. First, there are certain peculiar characters on these early whorls, their significance or possible value in classification remaining a puzzle to me. Second, extensive work with the microscope is an activity for a younger pair of eyes. With proper material at hand it might be worthwhile for further study.

The following paper was read before the meeting of the Conchological Club, November 5, 1957 and enjoyed by all present.

MOONLIGHT IN MEXICO

cx

CONFESSIONS OF A NOVICE, COLLECTING IN SAN FELIPE

By

Mrs. Dorothy Brown

On a field trip to San Felipe last December, we went to Ensenada Blanca, an excellent beach three miles north of the town.

I was slowly collecting a few of the more obvious shells, the ones I stumbled over. Far ahead of me raced Mr. and Mrs. Chace with Faye Howard, chatting gaily about the bucket full of live Turitella anactor they had found the evening before at Almejes Beach. To my right, Mrs. Wilkens shouted with joy at finding a porcelain white Cliva incrassata, and Bessie Faulkner, with a full load of Cardium procerum, Murex nigritus, and innumerable Tivelas, Pitars, and Macomas, was bemoaning her poor luck.

Holding back tears of utter frustration, I bent over a rock, pretending to be absorbed in the egg laying activities of Acanthina angelica and Hanetia macrospira. There were thousands of them all around me, doing what came naturally, and not a bit particular about the nursery site they chose for their off-spring. Poor little Crepidula spinosum were being smothered in the egg clusters and the rocks were turning yellow with them. It ended by the Hanetias laying their eggs all over each other.

Just then, Mr. Fitch strode up to me in his Seven League Boots, turned over the rock I was looking at, dug up several dozen handsome Semele flavescens with one hand, and dug a large hole around the siphon of a Panope generosa with the other. He shouted for a bailing bucket. This was my golden opportunity; to at least be of assistance to a collector, if unable to be a good collector myself. Proudly, I emptied my pail, and handed it to him. As he bailed and dug, his hands kept reaching up to me with offerings of strange little crabs, star fish, and urchins, which I stored in my out-stretched sweater.

No wonder they named Octopus fitchi after him!!

On our way home to camp that night, tired, dirty, and happy, Mr. Fitch told me the strange story of Cardium elatum.

Earlier that December, he and a friend had gone out one night, at a minus tide, on the sand and mud flats in front of the hotel. They had

found four of these bi-valves, so large that they more than filled their pails. When I questioned him more closely, he replied, and I quote, "You can't miss them. There was a loud popping noise and up they came, out of the sand like big derby hats. They were so big, and the moon was so bright, that we didn't even need our lantern to find them."

This story haunted me. No great game hunter ever looked forward more eagerly to his first elephant hunt, than I did to tracking down the elusive Cardium elatum.

February 13, 1957, found me again in San Felipe. There was a lovely golden moon that night, two days from being full, and a -1.4 tide. Taking my trusty weapons, a pail and Coleman lantern, I ventured forth alone, way, way out on the sand flats. Coyotes were howling, the village dogs were barking defiantly back at them, and sting-rays were lurking threateningly beneath every step I took. This was adventure, danger, and romance, at least to a city bred gal.

I walked and walked, and walked in ever-increasing circles, picking up Cardium sentifilosum and procerum, that popped out of the sand, pretty little Pitar concinna, Olivella dama, and Oliva incrassata. I even found my first live terebras, Terebra aspera, and Donax gracilis and novicula. None of these delighted me at the time. The first small doubt of Mr. Fitch's veracity assailed me. He was on the staff of the Fish and Game Dept. He could have been telling me a "fish" story or rather a "molluscan" story. But would he, he seemed so kind and had a rather honest face.

I hastily dismissed such unworth thoughts and decided the next night would be luckier.

On the 14th, tide -1.3, I tried again. I found Hanetia capitanea, excellent specimens, some so encased in an orange colored sponge that it was suprising to find the Hanetia within it. Also I found hundreds of Glottidea palmeri, which I finally learned to out-wit, some Tivela hyronensis, and a sand bar so covered with Encope grandis that it was impossible to avoid stepping on them. They were quite beautiful, gleaming with a bright purple color in the wet sand. But no Cardium elatum, not even a very small juvenile. Derby hats, indeed!

I trudged home, weary and disillusioned. How could Mr. Fitch pull a novice's leg. He was neither a gentleman nor a scholar!

The night of February 15th, tide -1.0, with all hope gone, I went out again. The moon was full, and poured a great golden pathway across the sea, and I walked slowly out to the edge of the tide. There, gleaming in the moonlight, large and golden, was one of the most beautiful sights I have ever seen. It was a Cardium elatum with its gleaming, white body extended far beyond its shell. It looked gigantic. There is a beauty to it alive on the glistening sand that is entirely lost when the shell is empty. I placed my bucket and lantern beside it, fell on my knees, and gently patted it, while offering up prayers of forgiveness for my doubts of that truth-telling nobleman, Mr. Fitch.

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That night I found twelve of them, which necessitated three separate trips back to the beach in order to carry them. The large ones must have weighed three to four pounds a piece.

Cardium elatum is the largest species of this genus, except for Cardium pseudo-lima, from Zanzibar found in deep water on the East coast of Africa. Lowe mentions an elatum that measures $5\frac{1}{2}$ inches from the Gulf of California, and there is one from San Diego in the collection of the California Academy of Sciences that measures 170mm in altitude. They range from San Pedro, Calif. to Panama. It is also known to occur in the upper Pleistocene of Southern and Baja California, and in the archaeological ruins and middens of south-western United States.

A Mexican family prepared a chowder from the Cardiums and it was one of the sweetest tasting shell-foods that I have ever tried-but it requires long cooking to make it tender.

As an epilogue to my adventure, the night I returned to the hotel with my trophies, Mrs. Vazquez, the manager's wife ran out to meet me, and eagerly asked me if I had found any Cardium. She was delighted at my success because Slim Barnard, famous Travel Editor for the Sunday Examiner was there, and was very interested in obtaining some photographs of an open Cardium. It must have the body extended. We picked out the largest, named it John, in honor of Mr. Fitch, and introduced John to Mr. Barnard. Unfortunately John had no Hollywood ambitions and remained closed as "tight as a clam". Before I could stop her, Mrs. Vazquez returned with a huge pan of fresh water, and thrust John into it. Before Mr. Barnard could get his camera adjusted, John went wild. With fully extended body, he thrashed back and forth, splashing us all with water. His strength and violence was unbelievable. Then once again, he closed up tight.

We next posed him on a dark blue table cloth and waited breathlessly. It wasn't until the other guests started making snide remarks, that we realized how ludicrous the situation really was. Six adults seated around a Cardium elatum, Mr. Barnard, with his thousand dollar camera focused and ready, all of us pleading and coaxing John to open - just a little. Needless to say - he never did.

Many wonderful poems have been written about shells. Because of the beauty of the star-filled, moonlit nights, and sunlit days in Mexico during my quest for the Cardium elatum, I love best John Milton's poem about it;

"These in their dark nativity the deep,
With heavens ray, and tempered, they shoot forth
So beauteous, opening to the ambient light."

Publications Received

A Historical Review of the Mollusks of Linnaeus, Part 5. The Genus Murex of the Class Gastropoda By Henry Dodge. Bulletin of the American Museum of Natural History, Vol. 113, Art. 2, 1957, pp 77-224. \$2.50 per copy- May be had from John Q. Burch.

To do justice to this study would require an extensive review. Many of the species are now placed in other families, and seem to most of us now to have little relationship with Murex. Many of the puzzles have been well and thoroughly aired and adequate references given. A few examples will serve here. Murex saxatilis has been confused with many others. Most collections label the large species from West Africa as this species. It is odd that none of them seem to be coming in now or very few of them. Nevertheless, almost all old collections seem to be full of them. To be true they may be labelled M. hoplites Fischer.

This is a work that seems to indicate a prodigious amount of study. It is a genuine contribution.

A Key to the East African Species of the Section Plicigulella Pilsbry of the Genus Gulella Pfr. (Moll. Streptaxidae) by B. Verdcourt. Rev. Zool. Bot. Afr., LV, 1-2) 1957 7 pp 1 fig.

A Review of the Genus Coxiella Smith, 1894, Sensus Lato By J. Hope Macpherson- The Western Australian Naturalist, Vol. 5, No. 7, March 8, 1957, pp 191-204. 5 Ill.

A well written paper, including descriptions of the species and a key- also distributional map..

A Study of Cantharus multangulus (Philippi), with Notes on Cantharus and Pseudonentuna (Gastropoda: Buccinidae) By Robert Robertson. Notulae Naturae- No. 300, July 26, 1957- Acad. Nat Sci. Phil. 10 pp, 19 figs.

A carefully prepared paper discussing the taxonomy as well as anatomical data.

Late Pleistocene Faunas From the Northwestern Coast of Baja California, Mexico By James W. Valentine- Transactions of the San Diego Society of Natural History- Vol. XII, No. 16, pp. 289-308, figs 1-6.

The author has made a detailed study of the composition of the faunas involved, and makes some interesting comments on the relationship of these faunas with others of the approximate age.

Type Material of Eucalodium oreutti Dall (Gastropoda: Pulmonata) From Oaxaca, Mexico By Robert J. Drake- Transactions of the San Diego Society of Natural History, Vol. XII, No. 17, pp. 309-310, fig.1, Sept., 1957

The eating function in Lymnaea stagnalis (L.) By Bengt Hubendick pp 510-511, 6 ill., - Arkiv For Zoologi, 1957
On the Molluscan adhesive epithelium By Bengt Hubendick-pp 31-37, 3 plates- Arkiv For Zoologi, Serie 2. Band 11 nr 3, 1957

Records of Uncommon Southern Australian Molluscs By Bernard C. Cotton Rec. So. Aust. Mus., Vol. XIII, no. 1, April 30, 1957, pp 117-130, 2 plates. This is a very interesting paper - description of the new species Charonia powelli Cotton with an excellent figure. A historical discussion of the Cottonia dannevigii Verco. A new genus is described - Notomella with type species Emarginula candida Adams- Also other new genera- An important paper.

** A limited number available from John Q. Burch- 75¢

Recent Mollusks of the 1940 "E.W. Scripps" Cruise to the Gulf of California By William K. Emerson and Milton L. Puffer- American Museum Novitates No. 1825, April 3, 1957. 57 pages, 1 plate, 1 map.

This is a valuable booklet for all in any way concerned with the fauna of West Mexico. The species are mentioned giving the records including bathymetric data. In addition to the systematic account the authors have made a quantitative analysis of value. The nomenclature is of more than passing interest because there are so many species involved in controversies, and the literature on this fauna is so badly scattered that it involves a problem of research to determine which one of several names is to be preferred. This work is an excellent guide, and the only complaint may be that the authors are not preparing a similar list covering all recognized species from the Gulf.

One new species is described- Family Sportellidae- Ensitellops hertleini. The plate is clear.

Inasmuch as I think all Novitates are still 25¢, this should be one the best bargains offered. American Museum of Natural History, Central Park West at 79th St., New York 24.

Journal of the Malacological Society of Australia- No. 1, Published 13th September, 1957. This issue contains 52 pages and heavy paper cover wrappers. The address is The Malacological Society of Australia, 351 Glenferrie Road, Malvern, Melbourne, Australia. The price is 15/ plus postage. The exact amount to remit in U.S. currency is not stated but should be around \$2.00 for those who order it, and it is certainly to be recommended that you do.

There are a number of excellent papers describing new species and giving many other items of scientific interest,-

Contents- Introduction by Dr. R. Tucker Abbott

Foreword by Bernard C. Cotton

Joyce Allan: Some Opisthobranchia New to Australia or Otherwise of interest. Two species recorded from Australia for the first time.

Dr. L.A.W.C. Venmans: A Species of Ferussacia in South Australia.

R. Burn: On Some Opisthobranchis from Victoria, Australia- Thirty-five species, of which 10 are described as new. One genus is described and 22 recorded. Illustrated.

Prof. J.M. Ostergaard and Ray Summers: A New Species of the Volutidae from North Australia. Aulica perryi sp. nov. A good plate showing two views of the shell.

Ron C. Kershaw: Tasmanian Intertidal Mollusca (Abstract)

Robert R. Talmadge: Validity of the Genus Erythraliotis.

Thelma Hartley: Semicassis angasi Iredale. Illustrated.

R.J. Plant: Existing Beds of the Bivalve Anadara trapezia Doshayes in Westernport Bay, Victoria, Australia. Illustrated.

Thelma Hartley: Bothriembryon barretti Iredale Discards Its Epäphram.

R. Burn: On Some Victorian Cephalopods. Two species of Squid and 1 species of Octopus not previously recorded from Victoria.

Bernard C. Cotton: The Lightning Volute- Ericusa fulgetra Sowerby from South Australia.

This paper by Cotton is beautifully illustrated showing 10 varieties on the one plate.

All of the work in this No. 1 issue is well done, and they have set such an example that to continue or excell will certainly carve a place for this journal on every systematic shelf on earth. It is to be hoped that they printed enough copies.

The Malacological Society of Australia- Newsletter Vol.5, No. 18, July 31st,1957 - A well prepared mimeographed bulletin with much information as well as personalia.

New York Shell Club Notes No. 34, Sept., 1957- Interesting as usual and in particular, two papers by Anthony D'Attilio.

Hawaiian Shell News, Vol. V, No. 12, Oct. 2,1957. Much valuable information and interesting notes about persons and places. I must admit that I still think will just string along with the idea that a shell may be 5" x 2" x 2" inches for example, or mm. if you prefer. This factor thing is fine I am sure for those who carry slide rules and the like. Makes me think that I have a specimen of the famous Golden Cowry in a show case in the store, it's factor- ? fear have misplaced that set of mathematical tables.

Proceedings of the Philadelphia Shell Club, Vol. 1, No. 2, Sept., 1957. This is indeed becoming an important publication- 30 pages, and attractive heavy green printed wrappers. A photographic plate of the members, and another of Conus gloria maris.

Contents- Food and Feeding in Conus- by Alan J. Kohn

The Tropical Western Atlantic Province by R. Tucker Abbott

Snails and Parasitism by Irving G. Kagan

Marine Pleistocene Mollusks of Eastern North America by Horace G. Richards

In addition many interesting notes including a list of the major items sold at the Buttonwood Farm Auction and the prices paid for them.

Walter J. Eyerdam has written that he plans to fly to South Chile Dec. 1 and return in April. His commission is primarily to collect plants , but as usual may be expected to bring back some very good shells.

Dr. Albert R. Mead, University of Arizona and Chairman of the A.M.U. P.D. this year has been given another grant by the U.S. Public Health Service to study or rather continue his research on a disease of the Achatina. Quite an extensive article in the Los Angeles Times of Aug. 11 praising his work. Altogether, the Health Service has granted \$17,900 for this work.

A clipping from the L.A. Examiner is of passing interest -- that Prof. Kunimasa Kanai of Tokyo has been able to produce cultivated pearls in a variety of colors- yellow, green, cobalt blue etc.

Another item made the news in the L.A. Times of Sept. 8- Octopuses, Crabs Get Diver's Tools- Sydney, Australia. " They will ' pinch' anything" according to the Bridge and Wharf Union. The divers want more compensation for tool losses- the \$1 weekly compensation paid now is not enough. "

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DEC. 1957 - JAN. 1958

CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

Subscription \$2.50 per year

We are now meeting the first Tuesday of every month at 7:30 P.M. at the Los Angeles County Museum, Exposition Park, Los Angeles, Calif. All interested persons are cordially invited.

Please mail all news to the editor- John Q. Burch,
1584 W. Vernon Ave.,
Los Angeles 62, Calif.
Telephone Ax 3-5710
Home phone Ax 2-7965

SCHOLARLY WORK I HAVE APPRECIATED

By John Q. Burch

Several recent publications on systematics have made a profound impression on my thinking. They are by authors who present ideas compelling the thoughtful reader to repeatedly sit back and ask the question of himself- "Is what I believe necessarily the truth?".

The Species Concept in Paleontology, The Systematics Association, Publication No. 2, London, 1956. A symposium edited for the association by P.C. Sylvester-Bradley.

An adequate review of the papers is obviously impossible here. I can but urge the serious reader to make a thorough study of the work offered, with the suggestion that one reading of the 145 pages of print involved will not suffice.

The work is arranged as follows:

(con.)

Foreword by Errol White, Chairman of the Colloquium - Dept. of Geology, British Museum (Natural History)

Introduction-

The New Paleontology by P.C. Sylvester-Bradley(University of Sheffield)

Part 1. The Species Concept in Theory

Species Transgressions in One Horizon by H.W. Parker (British Museum, Natural History).

The Species Conflict by Gwyn Thomas (Imperial College of Science and Technology, London).

The Time Factor in Taxonomy by F.H.T. Rhodes (University College, Swansea).

The Nature of Fossil Species by T. Stanley Westoll (King's College, Newcastle-on-Tyne).

Fossil Populations by Norman D. Newell (American Museum of Natural History, New York.)

The Nomenclature and Comparison of Fossil Communities by K.A. Joysey (University Museum of Zoology, Cambridge)

Can a Species Concept Be Justified : by J.B.S. Haldane (University College, London)

Part 2. The Species Concept in Practice

Species and Species by W.J. Arkell (Sedgwick Museum, Cambridge)

Species and Mutations by K.A. Kermack (University College, London)

Geographical Factors in the Definition of Fossil Species by D.V. Ager (Imperial College of Science and Technology, London).

Naming Carboniferous Non-Marine Lamellibranchs by R.M.C. Eagar (Manchester Museum)

The Species Concept Applied to the Study of Carboniferous Brachiopods and Goniatites by Donald Parkinson (Birmingham)

Discussion

The Species Concept in Stratigraphy by R.V. Melville (Geological Survey and Museum, London).

The Species Concept and the Stability of Nomenclature by A.H. Smout (Iraq Petroleum Co. Ltd., London)

Fossil Species and the Rules of Nomenclature by W.S. McKerrrow (University Museum, Oxford)

Conclusion

Biospecies, Chronospecies and Morphospecies by T. Neville George (University of Glasgow).

Glossary

The four page glossary in the above work is worthy of mention. Many terms in rather general use by writers on the new systematics may be not clearly understood and a concise definition is helpful.

A few random examples may be of passing interest.

Allometry - : Change of shape with growth, often given mathematical expression.

Allopatric: " Occupying mutually exclusive (but usually adjacent) geographical areas"

Allopolyploid: A polyploid with chromosomes derived from two species by hybridization, followed by doubling the chromosome number.

Gaussian curve:- A symmetrical statistical curve showing the "normal distribution" of a random population, derived by plotting the probability density against a variable quantity, and fixed by two parameters, the mean and the standard deviation.

Rassenkreis: " A polytypic species composed of several subspecies."

Formenkreis: " A collective category of allopatric subspecies or species (Kleinschmidt); in paleontology, a group of related species or variants" (Mayr, Lindsay & Usinger, 1953).

The work discussed above is available from the Systematics Association, London for \$2.00, or it may be had from John Q. Burch for \$2.25 post-paid.

The Species Problem- A Symposium Presented at the Atlanta Meeting of the American Association for the Advancement of Science, December 28-29, 1955. Edited by Ernst Mayr Publication No. 50 of the American Association for the Advancement of Science, Washington, D.C., 1957. A cloth bound volume of 395 pages. Order direct from the Association \$8.75.

The contents and contributors are as follows:

Species Concepts and Definitions by Ernst Mayr (Museum of Comparative Zoology, Harvard University, Cambridge, Mass.)

The Species as a Field for Gene Recombination by Hampton L. Carson (Department of Zoology, Washington University, St. Louis, Mo.)

The Plant Species in Theory and Practice by Verne Grant (Rancho Santa Ana Botanic Garden, and Claremont Graduate School, Claremont, Calif.)

The Species Problem in Freshwater Animals by John Langdon Brooks (Osborn Zoological Laboratory, Yale University, New Haven, Conn.)

The Species Problem with Fossil Animals by John Imbrie (Department of Geology, Columbia University, New York, N.Y.)

Breeding Systems, Reproductive Methods, and Species Problems in Protozoa by T.M. Sonneborn (Department of Zoology, Indiana University, Bloomington, Indiana)

An Embryologist's View of the Species Concept by John A. Moore (Department of Zoology, Barnard College and Columbia University, New York, N.Y.)

The Species Problem from the Viewpoint of a Physiologist by C. Ladd Prosser (Physiology Department, University of Illinois, Urbana, Ill.)

Difficulties and Importance of the Biological Species by Ernst Mayr.

Basic Questions of Systematics by Thomas Borgmeier- Systematic Zoology, Vol. 6, June 1957, No. 2, pp. 53-69.

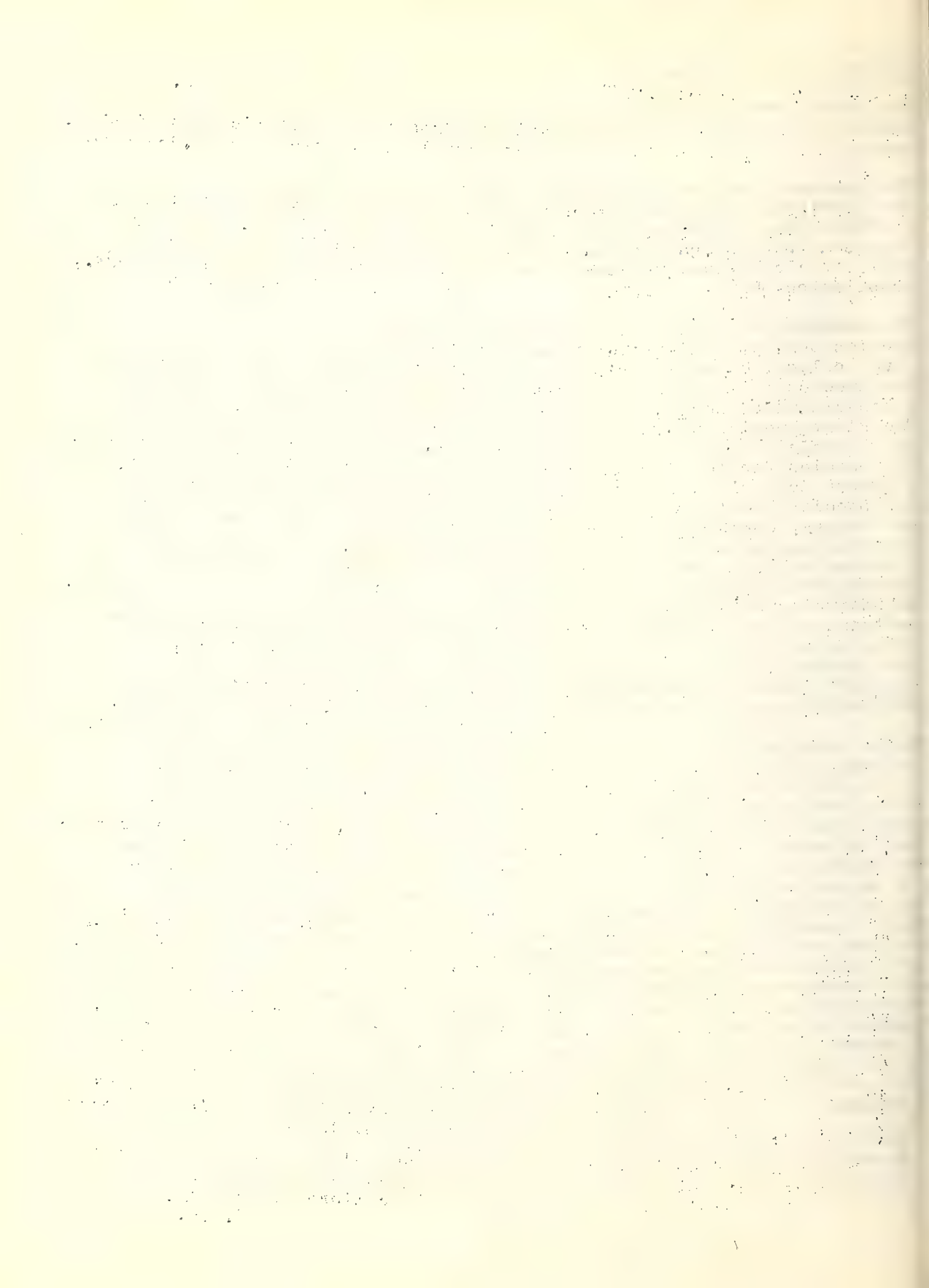
The title of this paper is accurate. The author considers the often conflicting views of a number of authors. Having read and reread this paper, I find statements with which I am disposed to disagree, but the matter is so well written that I find myself uncertain of my position.

A review such as this paper merits is obviously impossible here, and it is in some ways so inadequate that it is with some reluctance that I merely quote the final paragraph.-" I am convinced with Blackwelder and Boyden, that the introduction of evolutionary concepts into systematics has produced great confusion. The systematist may not be anti-evolutionary, but in practice he is non-evolutionary... Therefore, in opposition to Mayr's assertion (1949, p.23) that 90 percent of modern taxonomic work consists in the study of variation, I venture to say that 100 percent of systematic research consists in the investigation of the stable elements in nature. The principle task of the systematist is not "that of detecting evolution at work" (Huxley), but in the study of the work of evolution."

The obvious fact that the "species problem" remains a "problem" is certainly not for want of trying to settle and solve it.

It is impossible to praise work of this calibre too highly.

J.Q.B.



Geology and Paleontology of Canal Zone And Adjoining Parts of Panama
By W.P. Woodring U.S. Geological Survey, Professional Paper 306-A
145 pp Plates 3-23 and pocket of maps. 1957

The comparative descriptions of the stratigraphy and various formations is carefully done. Many Tertiary mollusks are described. The illustrations are excellent. They are photographic plates, but the work is well done making all characters easy to see.

It is a pleasure and a satisfaction to read the work of Dr. Woodring. The name of a genus will be followed by all proper references- the original publication, the type of the genus with mention of how and by whom designated etc. Too many publications by current authors are exasperating because they may use a series of weird new names with no explanation for having done so. It is natural to assume in such cases that the author did not know why he used the names himself, and to be original simply got them 'out of his hat'. Such writers should study one of the papers such as this one by Dr. Woodring for a guide. Accept my apologies- perhaps this is due to my annoyance at wasting an hour this afternoon running down such a reference with no data, and as expected in error.

The Age and Growth of the Scallop, Pecten maximus (L.), in Manx
By James Mason Journal of the Mar. Biol. Assn. of the United Kingdom
Vol.36, No.3, Nov., 1957. pp 473-492.

This is an interesting and rather an extensive study. The author found that " Growth-rings on the shell of the scallop (Pecten maximus) are laid down annually, in spring, and so can be used to determine the age. Scallops grow from spring to December, and cease growing in winter. The resumption of growth in the spring is marked by the appearance of the annual growth-ring at the edge of the shell". Much more data is given.

The Nautilus- Vol. 71, No. 2, October, 1957

Dredging for deep-water shells in southern Florida by Paul L. and Thomas L. McGinty. This is a very interesting paper to me at least. I recall the ten or twelve years when we were dredging along this coast in our small boat with great pleasure. I urge others to read this paper and if they get the urge to dredge they will never regret it.

Notes on Land Snails of Genera Solaropsis and Nenia by Henry A. Pilsbry. Dr. Pilsbry died Oct. 26. I wonder if any man who ever lived made as great a contribution to conchology as Dr. Pilsbry.

Prunum roscidum in New Jersey by R. Tucker Abbott.

New Form of Pecten by J.H. Webb -- Pecten (Comptopallium) radula griggi, new form. The paper is well written and the figures clear. Attention might be called to the fact that Mr. Webb has described a " form". This is not a " sub-species". More such papers should be published. They add to our knowledge without adding to the burdens of those who might have to dispose of the name had the author described it as a species.

The Range of the Sea Scallop By J.A. Posgay.

Proposed Revision of Haliotis ruber By Robert R. Talmadge.

Another of Mr. Talmadge's carefully worked out studies in this genus.

Elliptio complanatus roanokensis in the Neuse River By Waldemar M. Walter and Richard A. Parker

Catalogue of the Land Mollusca of Argentina By J.J. Parodiz

This concludes the series in this work.

Mrs. H. David Vernon, 905 Leonello Ave., Los Gatos, Calif. is offering the shell collection of the late David Vernon for sale at auction.

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ANOTHER Conus gloria maris

The following note from Bill Ulrich should be of interest to all.
 " I received the following from Pedro de Mesa, with a request that I transmit the information to you for publishing in your Minutes:
 (And I quote)-

" September last, another Conus gloria-maris, 4 4/5 inches was found in the southern islands of the Philippine Islands, and is now in the collection of one of the members of the board of directors of our organization, (he refers to The Association of Philippine Shell Collectors, Inc.). There is still a strong odor and is large enough to determine for certain by anyone who has ever seen an adult C. gloria maris. Not like the one found by Evarista J. Zambo of Mindanao, Cebu, which was found near Bohol in 1955. That specimen is only 2" and too young to tell even by experts on the Conus. Therefore, we can deny the claim that this species of shell is now extinct, as since 1338 when Cummings found 2 or 3 on a reef. Please report this to Mr. Burch of Los Angeles, for the good or entertainment of those interested, so that he may mention it in their next issue or report on shells." End of quote.

Two Races of Cypraea mappa L. from One Locality- By J.W.B.

A note from Professor J.M. Ostergaard, 45 Laurel Ave., Atherton, Calif. may be of interest. He is one of our acknowledged experts on the Cypraeidae. During the Christmas rush I had a letter from Prof. Ostergaard asking me to send him a fine specimen, if available, of Cypraea mappa L. of the race having the deep orange teeth. In a brief note I advised that I had no good shells of the race to which I thought he referred, from Africa. However, I packed two shells from the Sulu Archipelago fauna and sent them to him for his opinion. We have long known that we had two distinct forms in the material sent from Zamboanga, and while it has been our pleasure to study rather a large number of them we found that they divided easily into two lots. The following is a direct quotation from the letter of Professor Ostergaard.

" These two beautiful specimens of C. mappa you sent me from the Sulu Archipelago represent in my opinion two races of the species. The one with rose colored or pink base I take to be the Cypraea mappa mappa Linne' - pancyrthera Melv. ; the other, Cypraea mappa viridis Kenyon - and just the one I was inquiring about. It is quite natural to suppose that the two races might occur in the

Sulu Arch. even existing together without intercrossing. These two races seem to be mainly of Pacific distribution. The African form, which is less common, is C. mappa alga Perry - subsignata Melv. of which I have two fine shells. I shall be pleased to keep both of the shells ..."

A personal communication from Dr. T. Soot-Ryen, Oslo, Norway gives us news that will be of interest to the many friends made in southern California by Dr. Soot-Ryen and the then Miss Helen Rost.
 " Yes, Helen and I married two years ago and went to India for a year. Now we have a small boy of 10 months and stay in Oslo where Helen is completing her University studies. I am working on the organization of a marine invertebrate fauna of Scandania and neighboring waters. I had an invitation to go to Columbia University but decided to stay here until Helen had finished her studies. We had a very interesting time in India, where the conditions and nature are so different from Norway. The Minutes are very interesting to us as through them we can follow you and our other Californian friends. And your articles on nomenclature and systematics are inspiring though I confess that I am unable to agree with

some of your views. Perhaps I will send you a short article some day." End quote

Dr. Soot-Ryen need not be assured that it would be considered an honor and a privilege to publish any paper he might care to send. As for the views of J.Q.B. they change frequently, and may well accept another solution. J.Q.B.

The Christmas letter from our members Mr. and Mrs. Ernest Wilcox, 1738 Johnson Ave., San Luis Obispo, Calif. is a newsy note in itself. " ... Here at home we all keep rather well, - but busy. In November Emily had her 88th birthday, so we are now both the same age. We both wear hearing aids and our eyes are not so good, but we are not fossils yet. Speaking of fossils, my exhibition case of fossil shells has won first prize for three successive years at the county fair here.

Plans are under way for a fine Natural History Museum at Morro Bay, and I guess I will give my fossil collection to it.

Emory Chace writes of an auto trip down into Lower California and sends me some fine specimens. Walter J. Eyerdam writes of starting on a two months collecting trip to South America, part of an expedition from the University of California, going in seven air planes. A new friend of mine in New England has been sending me fine specimens of Atlantic shells."

Herman W. Miller

I have just been informed of the death of an old shell collecting friend. His duties as a teacher and missionary took him to many far places. He was stationed in Costa Rica for a number of years and collected many rare and unusual specimen shells. It was my privilege to describe one species of his collecting Trigonostoma milleri Burch, 1949, Minutes 94:3-4. From Central America he went to Cuba where he served for several years. His health had been poor for some time. Throughout the years Mr. Miller contributed numerous papers to these Minutes largely between 1943 and 1953. The note from Mrs. Miller follows: "I have been wanting to let you know that Herman passed away last June. He was in the hospital a month with gangrene in his foot caused by complications from the diabetes. He appreciated your friendship and shell news."

Hawaiian Shell News, Hawaiian Malacological Society, Honolulu, Hawaii

It would seem that all interested in shells should subscribe to this interesting paper. It is mimeographed and published monthly. It seems that all that is needed is to send them your check for \$1.50.

It is a pleasure to note that Dr. Alison Kay will do research work on the Bishop Museum collection of marine mollusks.

The Hawaiian Malacological Society's First Annual Shell Fair was undoubtedly a colossal success from the reports of all who had the privilege of attending.

The Natural Science Foundation of Pennsylvania has announced the intention of sponsoring a series of studies and publications on the Indo-Pacific Mollusca. The work will be under the direction of Dr. R. Tucker Abbott as editor. It is needless to add that this work will be a greatly needed scholarly contribution, and will be enthusiastically supported by all serious students. We are eager to learn the details of the final plan of the work.

MINUTES OF THE CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA-Nov.5,1957

Dr. Mattox called the meeting to order at 7:45 P.M. Minutes of the previous meeting were read and approved.

Mrs. Dorothy Brown presented a very enjoyable account of her adventures in San Felipe in quest of Laevicardium elatum. This was followed by an enlightening and extremely well documented paper by John Q. Burch: "Taxonomic Confusion in Conidae".

The selection of the nominating committee were announced:

President- Dr. Homer King

Vice President- Bernard Altshuler

Secretary-Faye Howard

Treasurer- Dorothy Brown

The nominations were seconded and approved.

Mrs. Rose Burch made the following announcement: " Mrs. E.P. Chace is one of the original members of our club, having joined when the membership was limited to ladies only. And then, when membership was opened to include the gentlemen, her husband, Mr. Chace, joined also. "

" Therefore, be it resolved: due to their long membership and interest in the club, I hereby nominate them to be honorary members of the organization."

This nomination of Mr. and Mrs. Emery Chace to honorary membership was seconded and unanimously approved.

Thirteen guests were introduced by hostess, Miss Bessie Falconer.

Recent publications were discussed by John Fitch and John Burch. The meeting was adjourned at 9:40 P.M.

Respectfully submitted,

Bernard Altshuler, Secretary

Minutes of the Conchological Club of Southern California- Dec.3,1957

The club's annual Christmas party was held in the Los Angeles County Museum basement. An excellent turkey dinner was served in the Museum Cafeteria. After dinner the members adjourned to the next room and viewed Kodachrome slides, and relived some collecting high-lights of 1957. There was no business meeting. Christmas gifts of shells were exchanged. The gathering was strictly relaxed and informal and enjoyable.

Respectfully submitted,

Bernard Altshuler, Secretary

Rae Baxter and Mrs. Baxter were our guests for a short time recently. Rae is with the Wildlife Service in Alaska, and has collected some very unusual shells. In fact, it is one of the boasts of J.Q.B. "...If I have never seen it, you probably have a good one", means anything Rae had some good ones because the JQB batting average was quite disgraceful. We enjoyed seeing them again.

Herb Ward of Guam was our guest for a day recently. Herb is an enthusiastic Scuba diver and has taken more than his share of the hard ones to get.

Miss Ruth Coats was up from Carlsbad for the Christmas Party. We enjoyed visiting with her and among other things getting a first hand report on the A.M.U. meeting at Yale. Ruth is past president of the A.M.U.P.D. as well as the Conchological Club.

Mrs. Ruth Craine wrote of their trip to Florida. Her letters are always full of news. The report on the ravages of the 'Red Tide' killing huge numbers of mollusks and fish was interesting.

Cypraea aurantium Gmelin 1791

My business partner, my wife and life time companion, Mrs. John Q. Burch is happy to add a specimen of the Cypraea to her extensive collection. It is interesting to think back on the way she was recruited to join our ranks as a collector. I think it was in 1939 when one of our diver friends gave Rose a specimen of a shell that was of passing interest to my son and me. It was a specimen of the Haliotis fulgens Philippi without siphon holes. The same defect has been given several names among the blacks, Haliotis cracherodii Leach, but it is about as absurd as naming a man with one leg. In any event though Mrs. Hattie Gemmell was making as near a complete collection of Haliotis as possible and managed to get Rose to trade that Haliotis for a superb specimen of Cypraea aurantium from Fiji. That did it and the collection of Cypraea now requires one large cabinet including specimens of Cypraea aurantium from a number of localities, Philippine Islands, the Sulu Archipelago, some beauties from Malaita, Solomon Islands, with the latest specimen from the Island of Magur in the Namanuito Atoll. Some of them have very complete data, longitude and latitude, bathymetric data etc. There are reports of this species from a number of other localities. Needless to add, they will be added if humanly possible.

Another New Book

The Faunal Connections between Europe and North America by Carl H. Lindroth. Wiley 1957 \$15.00

I have found this work of more than usual interest. The author discusses 71 species of mollusks of which 70 are identical in Europe and North America, 2 different subspecies. The historical background is well done. Chapter II- The Human Transport of Animals Across the Northern Atlantic is interesting reading. The comparative-ly short period of, at most, 460 years is not long enough for an immigrant to change characteristics entirely. The author here is disposed to question some of the reports of identical species as used in support of the theory of continental drift etc. A typical controversy discussed in detail is that of Cepaea (Helix) hortensis O.F. Muller. It was long regarded as a European importation, though after it had been found in "pre-Columbian kitchen-middling deposits," Pilsbry, 1894, p.321) suggested the importation might have taken place with the Vikings in the eleventh century. Later, subfossils of proposed greater age were recorded:- "in the glacial Pleistocene of Maine" (Dall, 1910, p.20); "in a shell heap-- associated with bones of the large extinct mink- Mustela macrodon Prentiss," on an island in Penobscot Bay, Maine (Johnson, 1915, p.131)...." The final conclusion of the author is that "Until further, reliably dated subfossils of Cepaea hortensis are discovered, nothing seems to prevent those hitherto found being of "post-Columbian" age."

The author does not mention marine forms which are a bit outside of his subject, but I am reminded of some of the ideas that have been upset during my life and interest in mollusks. For example, the theory that Lasaea rubra had been introduced on the bottoms of British ships. This sounded logical enough until the species was found (or rather Lasaea) in Pleistocene deposits of California, which was quite a bit before the appearance of British ships or any others from Europe. Dr. Myra Keen determined that the species from this coast are not only native but of different species.

Nevertheless, it is an interesting subject, and an interesting book.

Now in stock by John Q. Burch.

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1958

CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

Subscription \$2.50 per year

We are now meeting the first Tuesday of every month at 7:30 P.M. at the Los Angeles County Museum, Exposition Park, Los Angeles, Calif. All interested persons are cordially invited.

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Home phone Ax 2-7965

Comments On New Books by J.Q.B.

Local Races And Clines In The Marine Gastropod *Thais lamellosa* Gmelin- A Population Study- By Trevor Kincaid, Professor Emeritus in Zoology, University of Washington. 1957, 75 pages of text and 65 full page photographic plates. \$5.00

It is a pleasure to study a scholarly work such as this one. The book should be placed on a shelf with few others rather than be placed with countless efforts to give a name to every slight variation. To be true, I would feel a bit lost without a name, not that JQB differs materially from others on the street, but after all, I am different, and so are we all. I am JQB, but it seems a little needless to attempt to give a name to every individual mollusk that appears, and there is no reason to doubt that they are all as different as we are.

An excerpt from a personal letter to me from the author may be apropos here " To many persons it will come as a shock and perhaps more or less of a sacrilege to lump so many diverse things under

one specific name, but if we started making trinomials for all of these variations, we would be at it till the crack of doom... As you will note, I have made no Latinized subspecific names, but have utilized the term "morph" which is equivalent to "forma", but avoids the use of the latter as having too many general applications." End quote.

In my last venture in description I used the term "forma", but will be pleased to accept "morph" as preferable.

In this work Professor Kincaid has described 52 morphs, each being figured on a full page plate showing the variations. A note from the text is in point here, "In some instances the amount of variation within a single population is so extensive it cannot be given adequate expression within the limits of a single plate". End quote.

One of the plates illustrates the genetic organization of Thais lapillus according to Dr. H. Staiger (1954). Eight basic or acrocentric chromosomes, combining with elements of ten secondary chromosomes to make possible a wide range of variation.

Excerpts from the introduction of this work need no further comment.

"In recent years considerable attention has been directed to the study of infraspecific variation in animals. Such studies have not only created a revolution in the field of taxonomy, but have also thrown considerable light upon the nature of the evolutionary process itself, which since the time of Darwin has proved a baffling problem. In the case of birds the reinterpretation of the group from this standpoint has led to the reduction in the number of recognized species in the world list from about 27,000 to approximately 8,500.."

"It is becoming increasingly evident that the Linnean system of nomenclature, while it has served its purpose over the years, is ill adapted to express the relationships of organisms in the ever moving drama of organic evolution. To the older school of taxonomists the living world appeared as a static system only awaiting description; we now know that we are compelled to deal with situations that are highly dynamic and cannot be described in terms of traditional systematics."

A Hundred Years of Evolution by G.S. Carter

Published recently by the Macmillan Co., cloth bound, 206 pages \$3.75

When this book first arrived from the publishers and was placed in stock, I gave it a brief glance and concluded that it was simply another work on the history of evolution. However, continued demand for it induced me to take a copy home with me, and somewhat to my surprise it has held my interest to the end. The work is divided into two parts, and to be true, the first part is largely a background account of the thought and authors of the nineteenth century adding little to the average general reader, but very well written. Part II, The Twentieth Century, is well worth reading. The author seems to have the faculty of making some very abstruse theories clear in language easily understood by the layman. In fact, the last chapters of this book are certainly not beneath the interest of the specialist. The titles of these chapters are: 10. Early Genetics- 11. The Last Thirty Years-Genetics- 12. The Last Thirty Years-Ecology-13 The Course of Micro-evolution- 14. The Larger Course of evolution- 15. Conclusion.

The author makes it very obvious that we have no doubt learned more in the past two decades than were known prior to that time.

Good Clam Set At Pismo Best In Ten Years- This is the title of a large article in Outdoor California, Calif. Fish & Game, Jan. 1958. Our member John Fitch gives some reassuring news re the Pismo Clam.

Pacific Sea Shells By Spencer Wilkie Tinker

The 1958 revised edition of this well known manual has been received. The work was first published in 1952 and was paper bound in a limited edition. This book is beautifully bound, and at \$3.25 is a pleasing surprise.

Numerous changes in the nomenclature have been made. The necessity of some of them is to be regretted, and indeed a few are very controversial. On the whole though, the work is conservative, and the author is to be congratulated for retaining well known names of genera such as Cypraea, Conus etc. There is a genuine satisfaction when opening a new book these days to see illustrations of shells labelled with old familiar names instead of being startled by your old friends bearing unknown labels.

The shells treated are largely those from the Hawaiian Islands, but with few exceptions the species range throughout the Indo-Pacific. The descriptions are clearly written, and at the same time scientifically correct. This is a valuable book and I sincerely recommend it. We have it in stock now for immediate delivery.

However, the fact must be considered that in a work of this nature, a handbook, there are but some 300 species discussed. It is true that these are the more common and better known species, but they constitute a very small percentage of the recorded fauna. The novice may make the error of classifying many different species by one name because they resemble a figure in the book. This is inevitable in a popular handbook. Dr. Tinker states " This book is not a complete guide.." Dr. Tucker Abbott stated the situation clearly in the preface to his excellent American Sea Shells. He stated that there are over 6,000 species of mollusks living in North American marine waters, and he has figured and described some 1500. It is probable that we have over 1500 species in the Burch collection taken between the mainland and Catalina Island, California.

In no sense is this a criticism of the books under discussion, because it is obvious that if they covered all known species their work would have been a shelf of books and not a single volume. This has merely been a warning to the beginning collector not to be surprised when he finds a shell that is not figured in his book. A series of monographs of certain families or genera seems to be the only solution for anything like adequate coverage.

Perhaps I am impressed by the limitations of the literature on this fauna because we have recently acquired a lot of several thousand unclassified shells from the large island of Hawaii. We have a fairly large reference collection, and have worked with a number of collections from these islands. Nevertheless, each sizable lot seems to produce a percentage of puzzles. The result is that we have the study table littered with the works of Tryon, Reeve, Sowerby and others.

Glenn R. Webb- RR1, Box 256, Arkadelphia, Ark.

A note received advising that the publication Gastropodia will be continued with issue #3 in due course, but subsequent work will be done from the above address. A request was added to the effect that he is in need of a half dozen Trilchopsis to dissect.

The Collector- Vol. 3 Number 3, October, 1957

A Publication of the Sacramento Valley Conchological Society.

This group enjoy an active social life along with collecting.

Maybe some others take it too seriously. This sounds like a good time had by all at all times.

A COLLECTING TRIP TO GUAYMAS, SONORA, MEXICO

by Mrs. John Q. Burch

In December, 1947 our party settled down in Guaymas and collected actively throughout January and a part of February, 1948. I was the guest of Mr. Andrew Sorensen and his daughter Hazel. We stopped at the Miramar Hotel, which is three miles this side of the town plaza of Guaymas.

The accompanying map shows nine of our collecting stations.

#1. San Carlos Bay is approximately twenty miles north of the Miramar Hotel, and was the most difficult to get to. Here we had several interesting ecological conditions. High up in the Estero were mangroves where we found Littorina varia Sowerby, Nerita scabricostata Lamarck, and other high tide species. Going toward the ocean in the muddy sand were Turritella goniostroma Valenciennes. These were just under the surface with some showing through the muddy sand. It should be mentioned that the removal of the animal from this type of shell is another problem. On farther where the water is clearer and more sandy we found Strombus gracilior Sowerby and Strombus granulatus Swainson, as well as other gastropods, and many species of pelecypods. Around the rubble reef the usual rock shells were found, Thais biserialis (Blainville) and others.

#2. Estero Soldado is a beautiful station. It is also north but not as far as No. 1. At the mouth of the Estero is a beautiful sandy beach on which we collected Oliva angulata Lamarck, Oliva spicata Roding, Conus sp., and many other interesting sand loving species. Inside the Estero many species of pelecypods are available. It was here that I took my first Cardium elatum Sowerby, and from the gorgonian living on the edge of the rocks above and below the low water we found the Neosimnia.

#3. Miramar lagoon: This station was a short distance up the beach from the Miramar. Here we took Melongena patula (Broderip), Murex nigritus (Philippi), and many pelecypods and other gastropods. At the mouth of the Estero the collecting was excellent, best at the turn of the tide. We took Oliva spicata Roding, Conus perplexus Sowerby, Conus ximines Gray and other species that prefer sand.

#4. This station is north of the mouth of #3 and is rocky. Here we took Fusinus dupetitthouarsi (Kiener), Murex elenensis Dall, Murex erythrostoma (Swainson), Conus princeps Linne', Conus brunneus Mawe and many other mollusca.

Station #5 is in front and to the South of the Miramar and is rocky rubble. Here we collected Cypraea annettae Dall, Scurria mesoleuca (Menke), with other limpets, Tequila liqulata (Menke), Tequila pellis-serpentis (Wood) and others. Returning toward the Miramar between stations #4 and #5 we collected numbers of Oliva spicata Roding, many pelecypods, and some interesting specimens of Dentalium that had been washed in from deeper water.

#6. Punta Colorado on a sandy beach, we took Terebra robusta Hinds and other sand dwellers. Nearer the point, around rocks, we found

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Cypraea cervinetta Kiener, Conus nux Broderip, as well as a great many rock shells. On the other side of the point we found the large Strombus galeatus Swainson, Fasciolaria princeps Sowerby, and under and around the rocks are many interesting finds including Cypraea albuginosa Gray, Trivia solandri Gray and many small species on the rocks off shore exposed at low minus tides.

#7. To get to this station we took the old trail back of the point, "Punta Colorado", and back of the hotel. The collecting was good here. Among many other species we found Patella mexicana Broderip and Sowerby, but the large specimens were scarce. Here too, were found Cypraeas.

#8. San Ramon. This station was a stop on the road to Empalme where it is possible to get to the bay. It is a good collecting spot. We took fine specimens of Thais kiosquiformis (Duclos), Thais biserialis (Blainville), Crucibulum umbrella (Deshayes), Crucibulum imbricatum (Sowerby), Chama frondosa (Broderip), with many other species including numerous pelecypods.

#9. This station was a beach south of Empalme, probably ten miles, where the Southern Pacific of Mexico Railway once had a resort for employees and later deserted. Here we found the beautiful Pitar lupinaria (Lesson), Agaronia testacea (Lamarck), a number of species of the Olividae and other sand dwellers. In the drifts high up, many rare specimens were found - some with animals in the shells.

We found collecting in the bay islands extremely fine. These were reached only by boat

I have mentioned the outstanding items as I saw them at each station. Collecting on this trip is a memory I will always cherish.

Mrs. John Q. Burch, Los Angeles



Comments on Publications By John Q. Burch

The Family Cymatidae in the Western Atlantic by William J. Clench and Ruth D. Turner- Johnsonia, Vol. 3, No. 36

This issue is of unusual interest because the authors have considered most of the species from the Western Atlantic to be identical with species from the Western Pacific or the Indo-Pacific provinces.

The differences in the opercula of several species is surprising. Certain changes in the nomenclature in general use now seem to be offered on a sound basis. Charonia variegata (Lamarck), 1816 will replace Charonia nobilis (Conrad), 1848 for the species from the West Indies. The species from the Indo-Pacific will remain Charonia tritonis (Linne'). Many authors have considered them one species; others have given the Western Atlantic species a subspecific position. I have had my specimens so labelled, but inasmuch as they are separable, I am pleased to accept Charonia variegata (Lamarck) with a sincere hope that the matter will be settled. Nevertheless, due to the confusion in Lamarck's names for this group it is almost certain to remain a controversial matter.

The authors have used subgenera to divide the genus Cymatium. This is a pleasant surprise in these days when so many writers seem to have forgotten such a term. The difficulties involved from overlapping characters is mentioned by the authors, but it is scarcely necessary to mention the fact that virtually all of these subgeneric groups have been given generic rank by some recent authors.

Cymatium (Ranularia) caribbaeum Clench and Turner, new name, is the species from the West Indies labelled C. cyanocephalum in most collections. It is of interest to note Cymatium (Ranularia) sarcosoma (Reeve) from the Western Atlantic. It is well known in the Indo-Pacific, and the Philippines in particular.

Subgenus Cymatriton, new subgenus- Type species, Cymatium (Cymatriton) nicobaricum (Roding). This species is the shell known for the past century and a half as Cymatium chlorostoma (Lamarck). I am disposed to defer changing any labels on this one until we hear more about it. The type of the Bolten-Roding shell is not known. Inasmuch as the International Commission handed us that sales catalogue, it seems as if the least they could do now other than reversing themselves on a poor opinion, would be to hand down an opinion preserving such names as Lamarck's Cymatium chlorostomum which now appears in all the collections on earth with very few exceptions. It is a very common species from both the Atlantic and the Indo-Pacific. The authors here are perhaps technically correct, but that does not avoid the fact that such revolutionary changes tend to make the entire system nonsense. Cymatium (Guttarium) muricatum (Roding) will take the place of Cymatium tuberosum (Lamarck). This is another exactly as the above. Lamarck's name is in every book printed for over a century. It will be positively necessary to list both names when mentioning this species or else the vast majority of persons concerned will have no idea to which animal the name refers. No doubt Bolten had it, but so has every other collection made in modern times.

On the last page of this report is an item of passing interest.

A nomen nudum

" This species was published in mimeographed form only "

WHAT IS PRINTING?

The theoretical definitions seem to vary according to the economic status or the personal whim of the censor.

The degree of permanency of a document is never considered. Countless systematic papers are received at my establishment printed with letter press on the flimsiest of paper that will crumble within a decade. The paper on which this note is printed by mimeograph is 20 lb. bond. Any expert on paper will testify that this sheet will be sound and legible for many years after a large part of letter press printing has disappeared.

As a dealer in periodicals I have on my shelves many runs that are of passing interest in this connection. For an example, my current list offers a set of "The Murelet". This periodical is the official organ of the Pacific Northwest Bird and Mammal Society and began in 1920. From 1920 to 1925 it was entirely in mimeograph form. In 1925 one printed page was added, the cover, with the rest of the paper in mimeograph until 1930, at which time the paper became a letterpress journal. I advertise with the set indices covering the entire set from the beginning. There are those who would wish to discard the part with which they disagree.

There are many similar sets on the shelves. Indeed some of them went backward in this manner. An interesting example of this is Paul Reed's short lived periodical called "Mollusca". This paper started out in letterpress, then went to inexpensive offset, and ended its career in mimeograph. Incidentally, Dr. William J. Clench and Dr. R. Tucker Abbott contributed to this one during the offset stage. For the possible interest of one not familiar with this type of reproduction, the original idea was to photograph a typed sheet and run a paper plate made from this in much the same manner as mimeograph. It would be possible to send this paper to an offset printer and he could reproduce it. However, the new process with the offset seems to be to simply type the matter on a stencil and run the plate exactly as this has been run on a mimeograph. Several current books are so printed.

Multigraph is seldom seen now, but for many years this was a popular method of inexpensive printing. As a matter of fact, some of the work done on this machine is difficult to tell from letter press. The copy was set to type and then run on a rotary cylinder similar to that of a mimeograph. It might be mentioned that a great many publications of the United States Biological Survey, Department of Fish and Wildlife etc. have been printed by mimeograph or various other methods.

WHAT IS A PUBLICATION?

Technically the definition is anything that is printed in any form and is available by purchase to the interested public. A person may walk down to the nearest printer and have a systematic paper printed giving it any name he wishes, a "Leaflet", "Occasional Paper" etc. or anything he thinks of for a name, price it for \$1 or any amount, send a few to his friends perhaps, and the thing is published according to some. As a dealer in separate publications I receive requests and inquiries regarding countless papers to which the writer has had some vague reference. Thorough search may give us the information that the species was described in some unknown small school paper with the cheerful news that it was 'out of print' the day the class graduated, but by hear-say had been printed.

Received of Mr. J. H. Smith, the sum of \$100.00

for the purchase of the land described in the

instrument of conveyance bearing date of the 1st day of

January, 1900, and recorded in the County of

San Diego, California, in Book of Records No. 10, at

Page 100, and the receipt of the sum of \$100.00

is hereby acknowledged by the undersigned, who is the

agent of the said Mr. J. H. Smith, and who is authorized

to execute this instrument on behalf of the said Mr. J. H. Smith.

Witness my hand and seal this 1st day of January, 1900.

Attest my hand and seal this 1st day of January, 1900.

Notary Public in and for the County of San Diego, California.

My commission expires on the 1st day of January, 1901.

Notary Public in and for the County of San Diego, California.

My commission expires on the 1st day of January, 1901.

WHO SHALL BE THE ROYAL OFFICIAL EXAMINER ?

The principle of liberal democracy which inspired the founders of this country was that controversial questions should be settled by argument. Opinions should be formed by untrammelled debate, not by allowing only one side to be heard. Presumably the ultimate in control might be a ruling that all official printing must be engraved on plates of solid gold. This method should easily eliminate the well known rabble composed of persons such as J.Q.B., who considered it a privilege to attend a mere public school and the state university. We middle class citizens have no objection when the privileged few enjoy the delights of "Little Jack Horner" or look down upon us from the heights, but resent the inference that all intelligent thought must be in costly bindings.

We booksellers are too well aware of the simple fact that countless thousands of books containing much of the greatest nonsense ever written are nevertheless something in the nature of masterpieces of printing. The interior decorator who wishes to fill a five foot shelf over a mantle will find eager attention in any book store. Solid morocco with gilt trim may be had for less than the cost of some good paper backs.

If one of our engineers published an accurate formula for a rocket to the planets, there is no doubt but that some would ask first whether or not he had money enough to have it beautifully printed before considering whether he knew what he was talking about or not.

The following quotation is from a letter of Thomas Jefferson to Mr. Dufief, a Philadelphia bookseller who was prosecuted in 1814 for selling a book containing "atheistic" ideas.

"I am really mortified to be told that in the United States of America... a question about a book can be carried before the civil magistrate... Are we to have a censor whose imprimature shall say what books shall be sold and what we may buy? ... Every man in the United States will think it a duty to buy a copy, in vindication of his right to buy and read what he pleases." End quote.

I like this.

Who is going to dare to tell the sons of the pioneers who conquered this continent what they should say or write or read or how?

Ernest Wilcox, San Luis Obispo, Calif. The San Luis Obispo paper, Telegram-Tribune, of Jan. 23, 1958, carried a large article on page 1 with a photograph of Mr. Wilcox. The title was "Ernest Wilcox Finds Age No Bar to Talent". This was in honor of his 88th birthday. Briefly, it is an account of our members life from the date of his graduation from college, his service with the United States Department of Agriculture, followed by his years as an active farmer in California. The remarkable thing though is that after his retirement Mr. and Mrs. Wilcox became active members of the Gem and Mineral Club, took courses and are doing beautiful work in the way of lapidary, also in working with filigree jewelry, active in the collection and study of fossils etc.

It was our pleasure to be the guest of the Wilcox family for a short time on our recent trip north. The beautiful paintings by Mr. Wilcox aroused my admiration more than any other of his many activities. He has given his own display of paintings, and at one of the art shows, 8 of his paintings were sold, more than the work of any other artist. The paintings are remarkable.

All of this and I have failed to even mention the fact that our host has been an active and enthusiastic collector and student of shells for a great many years.

Proceedings of the Malacological Society of London- Vol. 32, part 6, Dec., 1957

The Duration of Life In Molluscs By A. Comfort. pp 219-241

In this paper Dr. Comfort reviews the literature of aging and the life span in mollusks. The list of references occupies about six pages of close fine type. This alone without the scholarly work of the author is a genuine contribution. I am sure that I have not been alone when I have suggested that in my opinion very little work has been done to determine the life span of marine mollusks other than in aquaria which is far from the conditions in which the animals exist in nature. In fact, I have been guilty of stating that all accounts I have read reminded me that the authors were engaged in pure guess work. I have on many occasions been annoyed at the lack of interest shown in the natural death rate and life span of the very animals on which scholars have devoted years of their lives studying. It seems that I have been in error because there seems to be rather an extensive literature on the subject.

Notes On The Snails of North-East Tanganyika Territory- 8.
Descriptions Of New Species of Enidae and Stenogyridae. By Bernard Verdcourt. This is the eighth of a series of systematic papers on this fauna.

Description Of the Jaw and Radula of Two Ariophantidae By L.A&W.C. Venmans

Chromodoris Contra Glossodoris- A Systematic -Nomenclatorial Controversy- By N.H. Odhner

Basteria- Vol. 21, No. 4 en 5, 1957- This is the publication of the Malacological organization of the Netherlands.

Contents- On Phyllaplysia engeli by Eveline and Ernst Marcus-

This is an anatomical study. In English.

De fossiele schelpen van de Nederlandse stranden en zeegaten, 41)

By C.O. Van Rechteren Altona, A. Bloklander en L.P. Pouderoyen

This paper is illustrated with 4 good plates, and being Pliocene - Pleistocene species are of unusual interest.

New data on recent Dutch Mollusca, a critical compilation ,21)

by A.C. Van Bruggen

Notes on Loricata by P. Kaas 5. On some preoccupied names 1)

Descriptions of New Species of Marine Mollusks From West Mexico

By Leo G. Hertlein Bulletin, Southern California Academy of Sciences, Vol. 56, Part 3, 1957 pp 107-112 , 1 pl. 14 figs.

This well written paper describes species that are of particular interest to the great many of our members and others who have been making collecting trips to West Mexico. It is certain that all of us will enjoy checking our specimens hoping to recognize the newly described shells. It was our pleasure to see some beautiful sets of some of them that had been collected by Mrs. Faye B. Howard.

The new species are Cardita spurca beebei Hertlein, new subspecies; Ocenebra sloati Hertlein, new species ; Ocenebra sloati hambachi Hertlein, new subspecies; Acmaea strongiana Hertlein, new species; Acmaea turveri fayae Hertlein, new subspecies.

On Cyclophorid Snail Shells and Opercula From Guerrero and Yucatan, Mexico By Robert J. Drake. So. Cal. Acad. of Sci.- Bulletin Vol. 56 as above. pp 113-118, 2 pls. 16 figs.

A careful study on the distribution and taxonomy of the species involved.

This bulletin should be available at \$1.25 from the Southern California Academy . Will order for those interested.

The Scallop

This is the title of a trully beautiful book now on my desk. The title page reads THE SCALLOP, Studies of a shell and its influences on humankind by eight authors, edited by Ian Cox, C.B.E., M.A. Published in London by the 'Shell' Transport and Trading Company, Limited, 1957. The neat note in the book reads " To mark the Diamond Jubilee of The 'Shell' Transport and Trading Company, Limited The Chairman, hopes that you will accept this copy of a book entitled ' The Scallop'. 18 October, 1957.

The cover is a bright crimson decorated with impressed figures in gold. On opening the book we find the inside of the covers illustrating some eleven or more species of the pectinidae in color on an attractive mottled background. The format is quarto of 135 pages and remarkably fine color paintings throughout. To mention but a few as I turn the pages, I see full page color reproductions of works of art involving the scallop such as , " Ancestral altar in the courtyard of a Roman house, Herculaneum", " Burial Urn, Olynthus, Greece", " The birth of Aphrodite; Greek terra-cotta", " Mosaic floor from a house in the Roman city of Verulamium, St. Albans, About A.D. 150"--- and many others--" Venus Anadyomene's Titian, c. 1520" (Please pardon me for not noticing the shell for a bit here). This is an art book as well as an excellent work on the natural history and systematics of the pectinidae.

The work is divided into chapters by the eight authors- all of them authorities in their respective fields-

In brief, I have never seen a more beautiful book on a shell.

If you can possibly get a copy by all means do so. This one is certainly not for sale, and the unhappy part is the following note " ... was distributed to its shareholders to commemorate the Company's 60th anniversary. There are no copies available for general distribution."

Additional Notes on the Invertebrate Fauna of Clipperton Island
By Leo George Hertlein and William K. Emerson. American Museum
Novitates, No. 1859, Dec. 6, 1957.

The fauna of this island is amazing with well known species from the Panamic Province living side by side with others known only from the Indo-Pacific. This is an interesting and well written paper. An extensive bibliography is given.

The American Malacological Union- Annual Reports for 1957.
56 pages and sent to all members. This is a neat and well prepared bulletin giving summaries of all papers read at the A.M.U. meeting and also the A.M.U.P.D. meeting. Photographs of the groups are included, a roster of members. A good portrait of the late Dr. Pillsbry with an obituary notice written by Dr. Horace B. Baker. The secretary is to be congratulated.

Dr. David Nicol , who has been with the U.S. Geological Survey, at the United States National Museum has advised that " After Feb. 20, 1958, my address will be Department of Geology, Southern Illinois University, Carbondale, Illinois."

Dr. Nicol has been doing some excellent work specializing in the pelecypods.

Mr. Andrew Sorensen of 247 Granite Ave., Pacific Grove, Calif. entertained friends at his home Feb. 11 celebrating his 95th birthday. Congratulations to the dean of west coast collectors.

Dr. Osao Taki has been publishing a series of carefully figured anatomical works on mollusks of Japan. The papers are in the English language and should be of great value to all able to appreciate such studies. A proper review should be made by one better qualified than the editor of this paper.

"Anatomical Study of Volutopsius deformis (Gastropoda)" from the Journ. of the Faculty of Science, Hokkaido University, Sapporo, Japan, Aug., 1957.

"Anatomical Study on Japanese Epitoniidae (2) Gyroscala and Acutiscala" By Isao Taki - Repr. Bull. Nat. Sci. Mus., (Tokyo) March, 1957

"Anatomical Study on Japanese Epitoniidae (1) Epitonium, Amaea, and Papyriscala" Bull. Nat. Sci. Mus. Sept.

In this connection it might be mentioned that I have been asked to get copies of another work published some years ago, but often mentioned as something of a classic. Having had the third request within the past several months it would seem that there is renewed interest in this study. The paper to which I refer is-

"The Pallial Organs in the Apisobranch Gastropoda and their Evolution Throughout the Mollusca" by C.M. Yonge. From the Phil. Trans. of the Royal Soc. of London, April, 1947. This is a folio pp 443 to 519 Inc. 38 text figs and 1 full page plate.

Such work impresses this writer with genuine regret that he has failed to become better qualified in microtechnique. It would be more humiliating to simply admit that I am probably lost while going around the first curve if it were not for the fact that I know that I have so much company.

Eugene Leloup of Belgium has published a number of excellent works on chitons. The following are recent additions to our library.

"Polyplacophora... Reports of The Lund University Chile Expedition 1948-49" 27 Published Lund, 1956. Quarto, 94 pp, 54 text figs. The specific characters, synonymy, measurements are all carefully given.

The following 5 papers by Dr. Leloup are in octavo format of the Institut royal des Sci. nat. de Belgique- Bulletin-

"Caracteres Anatomiques De Certains Callistochitons" Tome XXIX, 1953

"Chaetopleura unilineata N. Sp., Chiton De L'Equateur" "XXX, 1954

"A Propos De Chiton Heterodon (Pilsbry, 1892) Et De Chiton pergrinus Thiele, 1910" Tome XXXI, 1955

"Chiton (Radsia) Goodalli Broderip, 1832 = Chiton (Radsia) Chierchia Nierstrasz, 1908" Tome XXXI 1955

"A Propos Des Amphineures Chaetopleura Papilio (Spengler, 1797) Et Chaetopleura Apiculata (Say), 1830" Tome XXXII, 1956

The subgenus Halopsephus Rehder, with notes on the Western Atlantic species of Turbo and the subfamily Bothropomatinae Thiele By Robert Robertson- Reprinted fr Journ. of the Washington Acad. of Sciences, Vol. 47, No. 9, Sept., 1957. 4 pp 3 figs.

The author of this paper is to be sincerely congratulated for having covered this group thoroughly in four pages of type. The taxonomy is clearly stated, the reasons given for the new name well and briefly written, the relationship of all species of Turbo of this fauna given with a concise key, and concluded with a list of references. This is a paper that all concerned will use and appreciate.

Common Names Pro and Con
By J.Q.B.

The following is a quotation from Professor Trevor Kincaid's recent book, "The curator of a museum having a collection of molluscan shells in his charge naturally desires to have his specimens properly labelled, and for this purpose he depends upon the specialists in the several groups. He finds wide disagreement among the experts, and as he sadly changes his labels discovers the truth of the bon not attributed to Dr. G.W. Wharton (Allen, 1955) "The common names of animals change from place to place, the scientific names from time to time." End quote.

One of the students of a local university asked a few days ago "Who is the authority for the name Murex undivia?" I replied "Are you proposing to use Lamarck's name instead of the latest news which is Hexaplex foliacea with either Bolten or Roding as authority to your preference." The student made rather a pertinent answer, "I suppose that name is over due for a change. It was getting so that some students of mollusks recognize it".

It was my privilege last week to examine the proposed new legislation to be discussed and voted upon at the coming international meeting. The imposing tome reminded me of one of the United States Statutes At Large, or there have been occasions when the Session Laws of California approached it for size and complexity. I understood that it might be possible for one sufficiently interested to purchase a copy of this interesting if tentative work for a modest sum of a little over \$45.00.

Professor Kincaid in his new book gave us a smile with the following comment "One author dealing with sawflies redescribed the same species eighteen times. As one of my colleagues remarked regarding the description of some new species of fossils by a certain paleontologist, "a paper might be written entitled The Origin of Species with apologies to Darwin." End quote.

Common Names

It is amusing and interesting to read the efforts of other groups to arrive at some semblance of stability in the names of their animals.

For example, the reports published in the Transactions of the American Fisheries Society-"Committee On Names Of Fishes". The following is a quotation from one report submitted in Vol. 84. "The common name as here employed is viewed as a formal, anglicized appellation to be used in lieu of the Latinized scientific name of a species. It is hoped, and the history of the recent past confirms, that common names may be more stable than scientific names.... The Committee believes that it is desirable to establish a single common name for each species of fish occurring naturally or through successful introduction in the waters of English-speaking North America..." End quote.

They have established a number of rules of procedure to establish a single name for a species of fish. One or two of their rules may be of interest---"The common name shall not be intimately tied to the scientific name.-- Thus the vagaries of scientific nomenclature do not entail constant changing of names" (con.)

MINUTES OF THE CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA

January 6, 1958

Min. 175 p.14

Convened at 7:30 with 28 members.

In absence of Secretary, reading of minutes dispensed with.

D. Brown, Treasurer, reported balance of \$20.32 on hand Jan. 1, 1958.

C.M. Gate, Display Chairman, Brought display of Harpas, the genus complete except for 1 species and one variety. Also a model of live Harpa nobilis. Display of some rare Cypraea by Lloyd E. Berry announced for next meeting.

Mrs. Purch introduced new members Walt Shearer, and Bruce and Anita Campbell.

Mr. Shasky reported on a recent trip to Guaymas, showing many specimens taken.

It was announced that a new directory of members would be made up and distributed at an early meeting.

Many reports on publications:

Purch: Woodring's Report on Paleontology of Panama Canal Zone.

The Species Concept in Paleontology.

Symposium of Association for Advancement of Science, on The Species Problem.

Last two issues of Systematic Zoology.

Fitch: New issue of Johnsonia, Cymatiidae.

Records of South Australian Museum, pertaining to mollusks.

Kanakoff: Sacramento Valley Shell Club publication, with recipes for exotic shellfish dishes.

Mr. Fitch reported on an amazing bed of bean clams near Huntington Beach 5 miles long, 100' wide. Census showed 1500 clams per square foot for 2,640,000 square feet. 3,960,000,000 clams, or 3000 tons. The Pismo clams in strata below the bean clams were warped on the upper ends, resulting from siphons bumping into upper strata of bean clams, and mantle folding back. Trouble also reflected in growth measurements. Will publish on this at later date.

The first speaker, Mrs. John Q. Burch, told of Nine Collecting Stations in Sonora, Mexico, where she collected on a trip to Guaymas 10 yrs. ago when guest of Andrew Sorensen and Hazel Whelchel. She was there during five sets of low tides, or about 3 months. A detailed account appears in Min.#75.

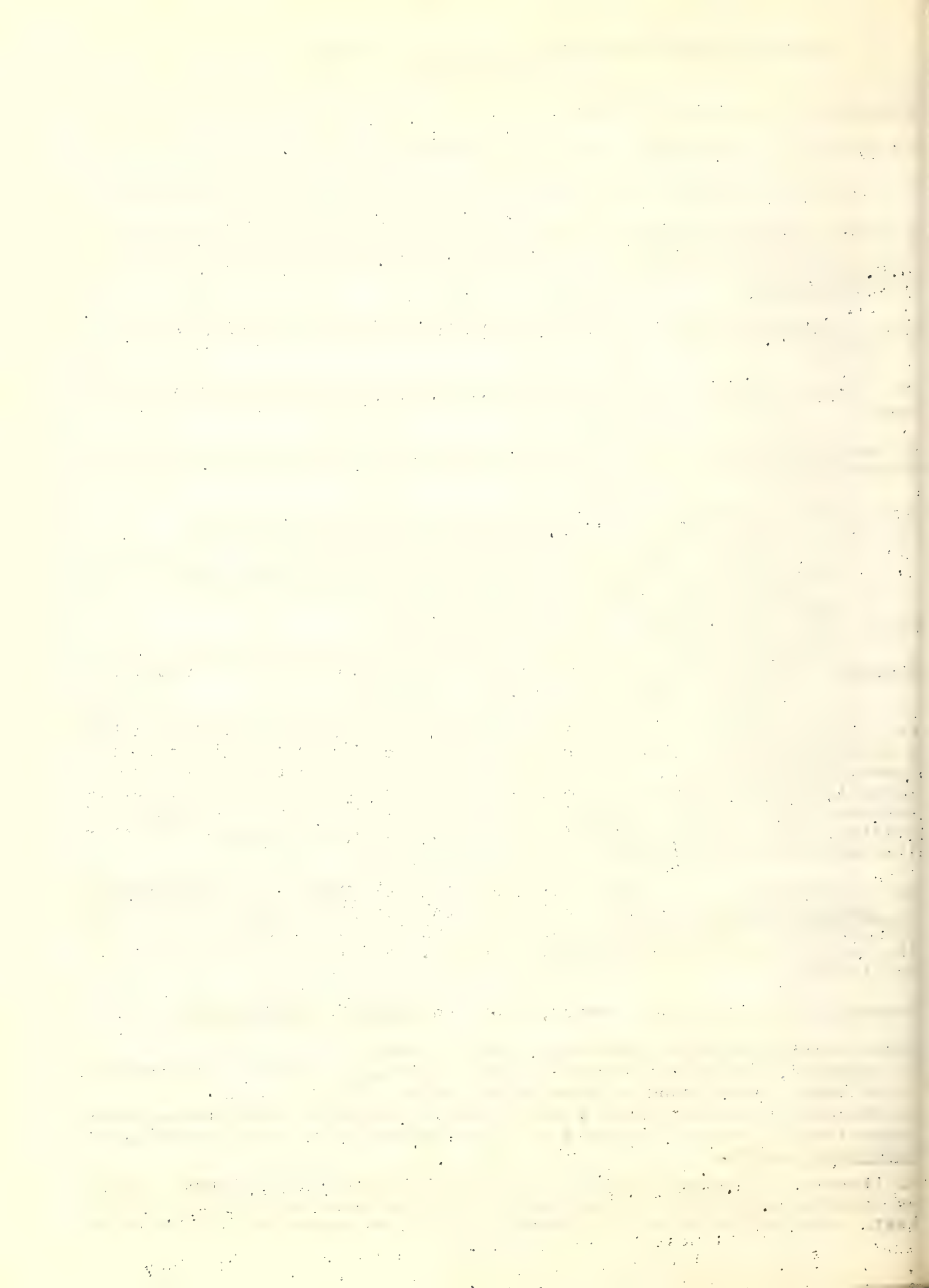
Second speaker, Dr. N.T. Mattox, spoke on PARASITES AND SNAILS.

Endo-parasites (inside the body), mostly worms.

1. Nematoda, some types found in snail bodies, use snail as an intermediate host. Also found in foot of Haliotis.

2. Cestoda, tapeworms. Many kinds of these living in intestines. Adult stage found in rays. Few cases of these in mollusks except locally, in Polinices lewisi.

3. Trematoda, flukes; most important group relative to mollusks. They use snails as intermediate hosts. Larva swims about seeking the right host. After it is introduced into the snail, it reproduces. When this



" If a fish is transferred from genus to genus, or shifted from species to subspecies or vice versa, the common name should nevertheless remain unaffected. It is not a primary function of common names to indicate relationship...."

Of course, the ornithologists are the envy of all. My friends, the Western Mockingbirds, who keep house in our wisteria remain mocking birds, even when some book searcher discovers that Mimus polyglottos leucopterus belongs to some resident of Australia or what not. The family of California Jays who reside in the large walnut tree to the rear of our home and scold Dzoorba, our Siamese cat so loudly, will remain jays after Aphelocoma californica has gone the route of all other scientific names. And it pleases me to think that my many little pets who eat the scraps and seed I put out for them in the feeder hung from the big lemon tree in the rear of my bedroom will not cease to be California Purple Finches, Song Sparrows and others, letting the searcher for old and forgotten tomes do what he wishes with Carpodacus purpureus, or Melospiza melodia.

This stability has permitted the ornithologists to devote time to actual study of birds instead of spending all of their time wondering what the name of the feathered object might be.

Mr. B. Altshuler brought in a specimen that is obviously Conus californicus Hinds which was taken alive in Nov., 1955 at Punta Penasco, Mexico. This may or may not be an extension of range. Hanna and Strong reported the species the length of the outer coast, but not this far up in the Gulf.

Mr. T. Pain of London, England in a personal communication comments: " Re the Museum Bolteniarum, I agree with you these names should not be merely ignored. Each one should be considered on its own. There is at the moment an application for the retention of Ampullaria Lamarck as opposed to Pila Bolten, before the commission, but until this is considered there is, as I see it, no excuse for not using the Bolten name, much as we might prefer Lamarck's more familiar name. "

Mimicry, a Test of Evolutionary Theory by Jeanne E. Remington and Charles L. Remington, Gibbs Research Laboratories, Yale University. Yale Scientific Magazine, Vol. XXXII, No. 1, Oct. 1957.

This is an interesting paper largely devoted to insects, but the question of possible advantages of mimicry in mollusks or other animals is mentioned. It is a new thought to me. Of course, we are all familiar with mollusks of very different groups bearing a close resemblance. This has been simply solved by the assumption that they were chance results of convergent evolution. The idea that such resemblance might be of actual value to one or more seems not to have been considered extensively in mollusks.

A Prognosis in the Problem of the Giant African Snail, Achatina fulica Dowdich By Albert R. Mead, University of Arizona.

This paper was presented at the 9th Pacific Science Congress in Bangkok, Thailand, on Nov. 29, 1957 as part of the symposium "Ecology and Pacific Distribution of the Giant African Snail with Special Reference to the Measures that are being taken for its Control."

The paper will appear in the Proceedings of the 9th Pacific Science Congress.

develops into cercaria, it swims through the water, fastening to grass, where it is eaten by sheep and settles in the liver. The snail is a necessary link in the life cycle of this parasite.

With the blood fluke, the larvae hatch in water, enter the body of the right snail, where it matures. Leaving the snail, it penetrates human skin, resting in blood vessels of the abdomen causing illness known as Bilharzia, or Schistosomiasis. Mostly in Egypt, Japan, and West Indies.

Some kinds seek out fish instead of snails as intermediate hosts, and pass on to humans by eating improperly cooked fish.

Parasites seek out specific hosts, some only humans, some cats or dogs. Some use only one type of snail out of many in the same pond. All flukes preying on humans are found in fresh water.

Adjourned at 10:00 P.M. J. Cates, Sec. protem

MINUTES OF CONCHOLOGICAL CLUB OF SOUTHERN CALIFORNIA, February 4, 1958

The meeting was called to order by the Chairman, Dr. King. Minutes of the previous meeting were read and approved. Mr. Altshuler, Program Chairman, was then asked to take charge of the meeting.

Elsie M. Chace was introduced as the first speaker and an inadvertent reference to her as a charter member of the Club led to a short but delightful bit of reminiscence of the days when the, then, Ladies' Club weakened and permitted a few gentlemen to attend. Mrs. Chace then proceeded to her subject of SOLENINAE. The eight sections of this subject were graphically outlined and well described by the speaker. The divisions were: 1. Siliqua 2. Pharus 3. Phaxas 4. Cultellus 5. Neosolen 6. Solen 7. Ensis 8. Solecurtus.

Next on the program was another installment of the new feature--The Shell Exhibit--(Could also be known as the "Drool School".) Crawford Gate took charge of events at this point and very ably supplied information about the rare & beautiful Cypraea, loaned for the occasion by Mr. Lloyd Berry. Mr. Berry's collection contains 150 species & 190 subspecies of this ever popular family of shells.

After intermission, reports on literature brought mention of 2 articles by Dr. Leo Hertlein -one concerning Clipperton Is., the other -new shells described from Gulf of California. A new book by Kincaid on Thais lamellosa and Tinker's "Pacific Sea Shells" were also reported.

The Field Trip Chairman suggested two spots in Southern California that would bear investigation. The dredging project now action at San Pedro & Jalama Beach in Santa Barbara County.

Mrs. Rose Burch introduced the ten guests in attendance.

The last on the program, but certainly not the least was a sound movie "Life in the Sea". Mr. Mel Fisher of Redondo Beach, after ten years underwater, came up with this splendid show. It is the first of ten such pictures to be produced for the Encyclopedia Britannica Film library. Mr. Fisher leaves shortly for the Caribbean area to continue his work.

Meeting was then adjourned

F. Howard, Secty.

MINUTES

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APRIL

1958

CONCHIOLOGICAL

CLUB OF SOUTHERN

CALIFORNIA

Subscription \$2.50 per year

We are now meeting the first Tuesday of every month at 7:30 P.M., at the Los Angeles County Museum, Exposition Park, Los Angeles, Calif. All interested persons are cordially invited.

However, there will be a few months this summer when we may meet at another place. It seems to be a genuine problem if we expect to contend with the traffic jame of a Dodger baseball game. It is certain that parking would be a struggle. The president, Dr. King, has appointed a committee to study the matter, and in any event all members will be notified of any change in plans.

Please mail all news to the editor- John Q. Burch,
1584 W. Vernon Ave.,
Los Angeles 62, Calif.
Phone Ax 3-5710
Home Ax 2-7965

THE AMERICAN MALACOLOGICAL UNION-PACIFIC DIVISION

Annual Meeting- Berkeley, Calif.- June 27,28,29, 1958

Meetings will be held in room 2005, Life Sciences Builsing, University of California. Headquarters -Hotel Shattuck,allston Way and Shattuck Avenue, Berkeley, California.

Reception-Town Room-Shattuck -June 26,1958--7:30 P.M.

Registration-June 27th--9:00 to 11:00 A.M. University of California, Life Sciences Bldg. Banquet--June 28th--7:30 P.M.-Hotel Shattuck \$3.00. Reservations should be made for lodging directly to Mr. J.H. Camp,Hotel Shattuck, before June 5,1958. Specify type of accomodations. Single \$5.50 per day--Double \$7.50--Twin \$8.00 Garage space provided. Coffe Shop and Dining Reom open from 7:00 A.M. Those attending notify Lucille Zellers,714 Elm St.,El Cerrito,Calif.

Pterynotus (Pteropurpura) swansoni Hertlein and Strong, 1951
One of our members, Don Shasky, brought a specimen of this species to the meeting of the Conchological Club. It was one of several taken in approximately 100 ft. off of Guaymas, Mexico. Since then we have seen one more specimen of this lot. All present at the meeting including JQB were unanimous in our failure to classify the shell. However, Don permitted us to take his shell with us on our recent visit to San Francisco and the bay area. Dr. Myra Keen identified it at once, and we later took it to the California Academy of Sciences, and as expected, Dr. Hertlein immediately brought out the holotype for our examination.

Briefly, this is one of the most beautiful of the Murex it has been my pleasure to see. It is triate with wide smooth wings extending outward from the shoulder instead of curving upwards as a giant specimen of Pterynotus petri Dall or P. rhyssa Dall. Of course, it is in the same group with them. This beauty is scarce enough that some of our best questioned the locality thinking it might be Indo-Pacific. It grieves me to conclude that the Burch collection so far lacks a specimen. Those fortunate enough to have it will find that it is a show piece in any cabinet of the muricidae.

The Los Angeles Times of March 12 contains a feature article of interest -" Deepest Secrets of World to Be Filmed"--La Jolla, Mar. 10 " Plans for a joint expedition by Capt. Jaques Cousteau, inventor of the Aqua-Lung with Scripps Institution of Oceanography, to photograph the ocean's greatest depths were disclosed here today. The world famous underwater explorer, now director of the Oceanographic Institution at Monaco, after a conference with Scripps scientists said that the proposed expedition would include his research ship Calypso, which would accompany a Scripps vessel.

Destination would be the Marianas Trench, 35,000 feet deep. Cousteau said that scientists aboard the Calypso recently photographed 25,000 foot Romanche Deep off the west coast of Africa, deepest place in the Atlantic Ocean, using an 80 lb. camera hung from a nylon cord and operated electrically. The camera is capable of withstanding tremendous pressure, which in the Romanche Deep was 750 times the surface pressure. The Marianas Trench, 100 miles south of Guam, is a narrow canyon which separates the deep Pacific Basin from the shallower oceans, according to Dr. Roger Revelle, Scripps director

The Nautilus- Vol. 71, No. 3- This issue is properly called The Pilsbry Nautilus and is a beautiful tribute to the late Dr. Henry Augustus Pilsbry. 1862-1957. Dr. Pilsbry was active and publishing his work for an amazing 75 years. This issue is divided into the following papers-

A Columbian species of the genus Rhodea. By H.A. Pilsbry

Dr. Pilsbry and fresh-water Mollusca

Dr. H.A. Pilsbry in marine malacology

Pilsbry on fossil and marine Mollusca

Henry Pilsbry, zoologist and man

Dr. Henry A. Pilsbry in Florida

Dr. Pilsbry as a draftsman

From the Pilsbry Chair of Malacology

Scientific contributions made from 1940-1957 By Henry A. Pilsbry

The Pilsbry Nautilus

THE ROLE OF THE BOOKSELLER

By J.Q.B.

My career as a bookseller began immediately after my discharge from the Marine Corps following World War I, and from that day to this I have found the service of those who read scholarly books both pleasant and profitable.

For a good many years I was in the sales department of a large publishing company. On occasions I would be called into conference with the president of the company on one hand and leading authors on the other. It was my duty to offer criticisms if I had them of a constructive nature. Those criticisms were not necessarily my own, but were gleaned from the opinions of other professional men. I represented those to whom the company hoped to sell their books, and to refrain from deflating the ego of some author was simply not good business. One of the mysteries of human behavior is the tendency of many successful persons to abandon the very thing that made them a success. The famous author of light comedy will start to write very poor mystery novels and be shocked at the critics. Success in any line including conchology may well develop what is known by some as a 'Jehovah' complex.

However, please appreciate the obvious fact that if I found fault with a publication, no one construed that to indicate that I thought I had the ability to write a better book. There is no doubt but that I claim the same freedom today. Conchology is my hobby, books are my business. Criticism is claimed as a privilege of all book men.

LAW

I have forgotten the exact quotation, but think it was by Anatole France that "The law in its majestic justice forbids the rich as well as the poor from sleeping under the bridges at night."

Law affecting booksellers may be on my mind because I have on my desk a form letter warning me that if I sell a certain book I may be sued for libel. Inasmuch as I have no intention of buying any of them I find it merely of passing interest. However, I order thousands of books that are simply what we call 'drop' shipments. I never see them. The last order received today was from a lawyer, an old customer. I am not even remotely interested in the book, but my staff will order it for him.

However, believe it or not, if I sell a nationally advertised book which I have purchased from a large publishing house, and by chance the author has called someone a thief or something worse, I may be sued for libel as well as the publisher and the author.

Of course, if there should happen to be anything thought to be obscene in any of them, I may find myself in jail even though I had not the 'foggiest' idea that the volume might not be a fitting gift to the church library.

But the most absurd, or so it seems to me is that a retail bookseller might technically be sued for breach of copyright for selling a book in which the author copied material from another. Now, this one is obviously impossible. A bookseller could read every word in every book without a clue that the thing might have been copied from another. To sue or prosecute the author and the publisher seems reasonable. If a bookseller attempted to read even a small part of his stock he would certainly have no time to sell any of them.

** I am aware of the fact that the above is a definite diversion from conchology, but this journal is largely a letter from JQB.

Publications Received

The Journal of Conchology- Vol.24, No.7, Feb., 1958.

" The Holocene Molluscan Fauna of Southwell and Wheatley, Nottinghamshire" - A.G. Davis and G.W. Pitchford

" On An Unfigured Species of Plekocheilus (Eurytus) from Colombia. --By T.E. Crowley and T. Pain- The species is P. (Eurytus) taquinensis (Pfeiffer). Well figured, 1 plate 3 figs.

" Vitrina major (Ferussac) in Surrey, with some remarks on the species-- By H.E. Quick.

" The Molluscan Sequence in the Lea Valley" By John F. Hayward

" The Radula of Cancellaria" By K.H. Barnard. ** This is an interesting and well written paper. The figures are clear drawings. It is hoped that the author may have the opportunity to study a series of radulae of the species involved. At one time we had some question regarding the radula of two species from this coast.

" Pisidium conventus Clessin in Loch Lomond" By Russell Hunter and H.D. Slack

" Pisidium from Hirta, St. Kilda" By W. Russell Hunter & J.D. Hamilton

" A New species of Siphonaria from the Persian Gulf" By Rev. H.E.J. Biggs --- Siphonaria asghar sp. nov.

" On the occurrence of Margaritifera auricularia (Spengler) in the English Pleistocene By M.P. Kerney

" Note on Petricola pholadiformis Lamarck By E. St. John Burton

" Acanthinula lamellata (Jeffreys) in Pembrokeshire" By L. Lloyd-Evans

" Extension Du Gastropode Méditerranéen, Cochlicella acuta (Muller) Dans Le Sud-Est De L'Angleterre Par M. De Leersnyder et H. Hoestlandt.

" Lieutenant Hankey and Cypraea growth" By Lieut. Col. R.J. Griffiths

Gunnar Thorson: Reproduction and Larval Development of Danish Marine Bottom Invertebrates with Special Reference to the Planktonic Larvae in the Sound. --- Copenhagen, 1946. A very large book, 523 pages and about 200 illustrations and charts.

Obviously this is not a new publication, but the tremendous amount of research and study involved in the preparation of this work never fails to arouse my admiration. The work is something of a classic for detail. No mere clerkish hackwork here. I had a reference today to a species of Natica with a small set of specimens to study. The result is that with this book open on my study table, the data is quite overwhelming. Egg masses, larval shells, complete development from egg to adult including the embryonic shell are discussed in detail. All are beautifully figured. Other species are treated in the same manner. The detailed study of the egg masses is impressive. It has been my opinion that studies of the eggs of closely related species have been far from convincing, but after studying this work again, I am disposed to think that I have been in error.

This work is sincerely recommended to many who might benefit by a consideration of the fact that data accumulated by extensive study may be a valuable contribution to human knowledge.

Marine Life- Pacific Tidal Regions- 24 subjects in full color By Dan H. Ryan, Naturalist Photographer.

This is booklet of remarkably fine color photographs of marine animals. The descriptive matter pertaining to each is clear and of interest.

In stock--- \$1.25

A card from Enid P. Donahue*****
La Hacienda, Sanibel, Florida. " World famous sea shell collection of the late Lillias F. Cockerill now on display at La Hacienda-- Free admission from 10:00 A.M. to 11:30 A.M. and 2:00 P.M. to 5 P.M. Evenings by appointment only. Daily including Sunday."

Publications Received

The Need to Classify By Roger L. Battern. Natural History, March, 1958. This is a beautifully illustrated article explaining in clear language to the layman the scientific results of the discovery of Neopilina galathea by the Galathea Expedition, and the reasoning behind the establishment of the Class Monoplacophora.

Those interested in medical conchology- the host parasite problem will find a number of important papers in the publication of Portugal- Anais Do Instituto De Medicina Tropical- Dec., 1956 Vol. 13 No. 4

" Ensaio sobre o estudo da numeracao cromosomica de algumas especies de moluscos de agua doce" By J. Fraga De Azevedo e Maria Margarida Goncalves

" Estudo da eficacia e modo de accao de alguns moluscocidas (Nota prvia) "By J. Fraga de Azevedo e F. Carvao Gomes.

" Subsidios para o conhecimento das bilharioses em Angola" By G. Jorge Janz e A. Morais de Carvalho.

" O estado actual do problema das bilharioses humanas na Africa Oriental Portuguesa" By Alberto Soeiro e Tito de Morais.

Boletim Do Instituto Oceanografico , Tomo VI- Fasc. 1 e 2- Univer- sidade De Sao Paulo, 1955. This issue contains two papers of interest to us-

" Sea-Hares and Side-Gilled Slugs From Brazil" By Eveline and Ernst Marcus , pp 1-49 with 8 plates. In English and well written. One new species is described , Pleurobranchaea hamva , but the paper consists of a discussion of all species known from this fauna with an extebsive list of references.

and

" Contribuicao Ao Conhecimento Dos Moluscos Da Ilha Fernando De Noron- ha- Brasil" In the Portuguese language- By H. de Souza Lopes e Moacir Alvaranga. pp 157-213 , 3 plates.

This is an interesting paper and the list of species is rather imposing. Among other species of unusual interest is a plate of two illustrations of Lyria (Enaeta) guildingi (Sowerby). This is a species of the volutidae seldom seen.

Journal of the Marine Biological Association of the United Kingdom- Vol. 36, 1957 Nos. 1, 2, 3- The following papers are of particular interest to specialists in certain groups of mollusks.

" Notes on Mytilus galloprovincialis Lamarck in Great Britain" By B.T. Hepper , pp 33-40, 1 plate 2 text figs.

This is a well written paper and the plate is excellent showing a series of specimens . The author gives a clear statement of the taxonomy, but I am reminded of our varying opinions re the smoth swollen form of M. edulis that reappeared in such numbers in our estuaries a few years ago. Dr. Coe finally gave it the name Mytilus edulis diegensis Coe , but the resemblance to this species is marked.

" The Growth of Scrobicularia plana (Da Costa) in the Gwendraeth estuary" By J. Green . The author estimates that some specimens lived for 16-18 years and reached a length of 54mm. pp 41-47.

" The Response of the limpet , Patella vulgata L. , to waters of different salinities" By D.C. Arnold.

" Viability and glycogen reserves in the newly liberated larvae of Ostrea edulis L." By Dorothy M. Collyer pp 335-337

" The Adaptations of Lasaea rubra (Montagu), a small intertidal lamellibranch" By J.E. Morton pp 383-405- with junior authors A.D. Boney and E.D.S. Corner. This is a study of the ecology of this species which should be of some interest to us because we have two species on the Pacific coast.

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COLLECTING STATIONS --- PUERTO PENASCO, SON., MEXICO

To reach Puerto Penasco it is about 455 miles by good paved road from Los Angeles by the way I shall now describe.

The San Bernardino Freeway is taken to Indio. About three miles south of Indio, state highway #111 is taken through to Calexico. This cuts off a few miles, but most important cuts down on the traffic. At Mexicali you leave town as though you were going to San Felipe, but about 4 miles from the main part of town a road goes east which is marked San Luis. This junction is marked by an overhead traffic signal. The road to San Luis is taken, and once you are past this town there is nothing to stop for for the next two hours of driving, unless you want some pictures of the very large Cholla cacti that grow along the highway.

Before leaving Sonoyta, which is where you turn south to go to P. Penasco you must purchase your Mexican tourist permit which costs \$3.10 for each person over 12. The Customs office is approximately 2 miles north of the town of Sonoyta. (Sonoyta is actually 2 miles south of the border.)

To those that wish to camp there are two possibilities; Cholla Bay and Norse Beach. For those who want good accommodations and do not mind driving back and forth to the collecting areas very good rooms are available at the Playa Hermosa Resort for about \$6.00/day. The driving distance from the resort to either Norse Beach or Cholla Bay is about 7 miles over bumpy desert road.

The accompanying map illustrates not only the collecting stations, but the various roads in and around the area.

It is not advisable for you to attempt to drive to Norse Beach by family car unless two or more cars go together, since at certain seasons the sand is very soft and help will be needed getting out of or through some of the spots. Just remember, if you always go left at each branch of the "road" you will have less difficulty. This also applies to taking the road over the dunes -- go over the one the farthest to the left. The same warning should apply to taking the road to Black Mountain, although in general you won't have as much difficulty with this road as with the previous one. If you should have trouble on either one don't hesitate to hike back to Cholla Bay for help since there is nearly always at least one American there who has a Jeep that will give assistance.

There two shell collections here that you will want to see. The first is in the bar at the Playa Hermosa Resort, and the second, which is much better, is in the cantina across from Nacho's Place at Cholla Bay.

In describing the collecting stations of this area Cholla Bay must be considered as a single station, although certain species are more apt to be found at more or less specific locations of the bay.

CHOLLA BAY

As you walk along the shore of Cholla Bay about $\frac{1}{4}$ - $\frac{1}{2}$ mile from the usual camping site there is a large area of marsh grass where Cerithi-
dea albondosa may be picked up in abundance. There are numerous rocky ledges along the shore as you approach the marsh grass where Acanthina
angelica and Tegula rugosa may be gathered in quantity. This area is best saved for the time when the tide is just going out or has already come in.

If your drive or walk up to the boat landing at Cholla Bay you

will see a small low reef approximately $\frac{1}{4}$ mile out when the tide is low. It is out from this reef in the channels that drain Cholla Bay where the large Oliva incrassata are found. Although none were found in December when we were there, they were plentiful in March. I took several of unusual size, the largest being 85 mm.. In and around this same reef, under stones, you will also get Anachis vexillum, A. nigricans, and A. varia.

No matter where you walk along the sand flats you are liable to find Conus comptus, C. regularis, C. ximenes, Polinices tiber, Cantharus anomalus, Oliva spicata fuscata, Olivella dama, Agaroni testacea and many other gastropods and bivalves.

In December I have found Strombus gracilor on the flats, and returning in March there have been none. In March I have found Galeodes patula in abundance when in December not a single one was taken.

About one mile from the boat landing out along the sand flats toward Black Mountain there are several areas that can hardly be called reefs, but for want of a better term that is what I shall call them. Here in both Dec. and March I have seen Turitella gonostoma in tremendous quantity.

When the tide is -0.9 or more according to the Guaymas tide a large oyster bed about two miles out from the boat landing and almost straight out from Black Mountain is uncovered. If you are looking for this location and the tide is still not all of the way out look for jets of water being shot above the surface by the oysters. Feeding on these oysters are large clean Pterynotus nigritus. These are the nicest "black murex" I've ever taken anywhere. Those that look very carefully will be rewarded with an occasional Pinna maura living among the oysters, but almost completely buried. An occasional Pterynotus erythrostomas will also be found here.

PELICAN POINT

When collecting here be sure to wear gloves, because most of the shells are under rocks, and some nasty cuts will be the reward of those who forge their gloves.

Here we find the cowry Zonaria annettae and also Trivia solandri. From 50-75% of the cowries found here will have one or more crepidulas attached thus spoiling the shell as a cabinet specimen. Also found here was a nice, but small, (4 inch) Strombus galeatus.

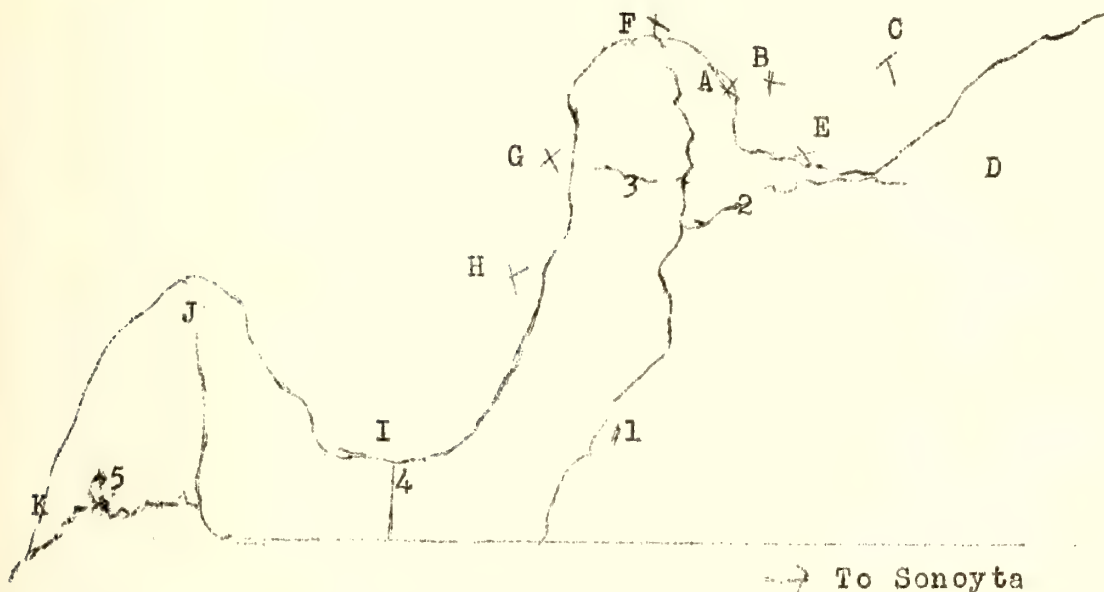
NORSE BEACH

The attraction of Norse Beach is the beautiful Pterynotus erythrostomas, the pink murex, but to secure these one must plan on a 5 mile hike. You can either walk from town and have someone meet you at the northern end of the beach, or you can drive to the beach and walk $2\frac{1}{2}$ miles to the collecting area and then retrace your steps. I have done both, but prefer to be let off in town by someone who isn't game for this excursion, since several small shells such as Pyrene major and P. fuscata can be picked up between town and the reef where the pink murex live. These murex are not to be compared with the large ones that can be taken by diving around Guaymas, but they are still one of the more desirable shells to be found around P. Penasco.

Another good spot for Zonaria annettae are under the rocks at the northern end of this beach.

Beach South of Town

None but the most careful driver should attempt the extremely bad rocky road over the hill to this area. The automobile takes a beating at best. What is found here is not worth the effort to the casual collector, but many small species will be found in the pretty tide pools at low tide.



- A-Boat Landing-Cholla Bay
- B- Low Reef-Oliva incrassata
- C--Oyster Beds- Murex nigritus
- D- Black Mountain
- E- Marsh Grass- Cerithidea albonodosa
- F- Pelican Point- Cowries
- G-Norse Beach- Cowries
- H- Norse Beach- Murex erythrostomus
- I- Playa Hermosa Resort
- J- Down Town
- K- Beach South of Town
- 1- Road to Cholla Bay
- 2- " " Black Mountain
- 3- " " Norse Beach
- 4- " " Playa Hermosa
- 5- " " Beach-South

The above paper was read by Mr. Don Shasky at the March meeting of the Conchological Club of Southern California.

1. The first part of the paper is devoted to a general discussion of the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the system has solutions for all values of the parameters α and β if the function $f(x)$ is continuous and has a bounded derivative.

2. THEOREM 1

Let the function $f(x)$ be continuous and have a bounded derivative.

Then the system of equations (1) has solutions for all values of the parameters α and β .

The proof of Theorem 1 is given in the Appendix.

It is easy to see that the system of equations (1) has solutions for all values of the parameters α and β if the function $f(x)$ is continuous and has a bounded derivative.

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For the next two months we will meet on the evening of the third Tuesday of the month instead of the first Tuesday as has been our custom. This change is to avoid parking complications on nights when a Dodger baseball game will be played. Meetingsw same locality- Los Angeles Museum 7:30 P.M. All interested persons are welcome.

News os shells or shell affairs should be mailed to the editor-
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Comments On New Books by J.Q.B.

The Dawn of Life by J.H. Rush Hanover House, 1957 \$4.50

I have been reading this new book and find it a well written digest of the scientific thinking about the origin of life.

Speculation about the manner in which life could spring from non-living matter is discussed in dramatic detail. The chemistry of living things is the theme of the last half of the book.

The origin of the universe, the solar system, and contemplation of the earth before life began, requires a large part of the first half of the author's work.

I have no hesitation about recommending this book to those of inquiring minds. The theory that organic life began as a result of some unknown combination of matter and energy leaves much to the imagination.

The great modern telescopes reveal many millions of galaxies more or less like our own. Our astronomers give us some very (con.)

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convincing data on the expanding universe. If true, the age of the universe must be approximately the same few billion years suggested for the earth. If all of the galaxies were close together at that time, was the entire universe formed by one primeval cataclysm and explosion? If true, the suggestion that this was the original creation of all things is very unsatisfactory. Reason does not expect something to come from nothing. If such an explosion occurred, something must have been there to explode. Nobody knows. But we grow bigger for wondering.

I hasten to add here that some of these musings are those of J.Q.B. and not the author of the book of which I started to write,

Some of my friends may be critical when I mention that such thoughts fail to lead to the simple assumption that Almighty God made the system solely for sweet Homo sapiens, the most ruthless killer to appear in the long and savage 'eat and be eaten' history of the earth, and who now seems tempted to use his recently acquired power to destroy his accumulated culture, his own species, perhaps all life, or even his planet. Surely the stupendous labors of the creator were undertaken with a grander object, a nobler aim.

The spectre of 'peace' rearing its ugly head is terrifying to many. It would seem that the brain capable of cracking the atom, building satellites, and aspiring to greater marvels, might figure out some way (short of international suicide) to keep the wheels of industry turning.

Conus from the Indo-Pacific By John Q. Burch

Inasmuch as it is my duty to assign specimens to species to be listed as a dealer, and large numbers of shells are passing through my hands, I propose to list below a sample of my notes covering the past several days. Much of this will be copied directly from labels I have placed on actual shells.

Please appreciate the fact that I realize that a percentage of error in such rapid assignments is inevitable. Criticism and advice is requested, and will be sincerely appreciated. Furthermore, I will be interested in knowing whether or not such a paper would be of interest to the readers of this paper if continued into other groups. This is not a sale catalogue and no orders will be accepted from this list.

Conus longurionis Kiener, p.308, pl.92, f.6- Type in Prevost- fide Tomlin. Mozambique, Portuguese East Africa

Tryon, Manual of Conchology, Conus, p.75- states that this species is 'nearly identical' to Reeve's Conus aculeiformis. However, Tryon figures Kiener's shell on Pl.23, fig.94. With Kiener's fine plate before me there seems to be little doubt but that these shells from Mozambique are the same species or another almost identical. Next, with Reeve open on the table, Pl.44, fig.240, the species Conus aculeiformis Reeve is figured. This is certainly a more robust shell with much coarser markings. The Mozambique shells before me are much more slender and fit Kiener's figures perfectly to my eye.

As dealers we listed this species as Conus longurionis Kiener and have distributed them internationally. The question is simply whether or not the shell of Reeve, 1844 and the shell of Kiener, 1849 are conspecific. Until otherwise convinced they are two species.

Conus clavus Linnaeus- Ref. Linnaeus, Syst. Nat. Gmelin Ed., p.3390
Reeve, Icon. Pl. XXXVI, fig.194- in syn. Conus auricomus Brug.

It is obvious after reading Dodge--Mollusks of Linnaeus, Part 2, pp. 46-47 that there was much early confusion re this species. However, the conclusion of Reeve has been generally accepted whether correct or incorrect at the time. A century of usage should not be lightly changed. These shells came from Mozambique, Portuguese East Africa.

Conus aureus Brug. 1792, p.742. These specimens seem clearly to be this species. I am accepting Reeve's position-- in syn. Conus auricomus Lamarck--** but Conus auricomus Brug. is Conus clavus L.

Conus cuvieri Crosse 1858 - new name for Conus deshavesii Reeve, 1843
= Conus cervus Sowerby, 1838 (non cervus Lam., 1822.
Specimens from N.W. Australia.

Conus varius Linnaeus--Porto Amelia, Portuguese East Africa.
Ref. Linnaeus, Syst. Nat. 2, p.1170--Lamarck, Anim. sans vert. vol. vii
p.454; Enc. Meth. pl.321, p.3. Reeve pl.12, fig.58- Linnaeus p.715,
1758--Argenville Conch. t.15, f.R- Reeve supplementary pl.58, Pl.41
figuring a specimen reportedly from the Galapagos.

Conus cinereus Brug. 1792, p.573 (Conus cinereus Roding, 1798
Gulcullus p.46- based on Mart. ii, pl.52, f.578 = clavatus Roding)
Ref. Tryon, Manual Conch. p.58, pls. 57-61. Tryon places in synonymy
Conus zebra Lam. (not of Reeve or Sowerby) and Conus gabrieli Kiener.
and as valid species varieties of C. cinereus--
Conus straturatus Sowerby, Borneo; C. bernardii Kiener; C. politus
Weinkauff. Specimens from India.

Conus stramineus Lamarck, 1810--Ann. du Mus. H.N., Paris xv, p.273,
1810. fide Tomlin.
Ref. Tryon, Manual Conch. p.59, places in synonymy of Conus nusus
Chem. Tomlin lists without comment other than apparently good
species- fide Tomlin-Conus nusus Dillwyn, based on Chem. = cinereus
Brug. Tomlin leaves Conus stramineus Lamarck as good species.
Ref. on C. stramineus - Reeve, Pl. XLII f.225, a, b, c. The specimens
before me are from Bougainville, New Guinea, and match Reeve's
figures and description perfectly. I consider this a good and rec-
ognizable species.

Conus cinereus gabrieli Kiener- Sulu Archipeligo from Zamboanga.
Explanation- Conus cinereus Brug.-data as given above.
Conus gabrieli Kiener, p.315, pl.74, f.4, 1849-50. Type in Delessert.
= cinereus Brug. fide Tomlin.
Tryon, Manual Conch. pl.18, fig.8 reproduces Kiener's figure (but
states it is in the synonymy of C. cinereus)
Nevertheless, repeated shipments from the Sulu Arch. fit Kiener's
figure and description and seem separable to me. Therefore I have
labelled several lots Conus cinereus gabrieli Kiener, accepting
Kiener's name not as a full species, but as a valid and recognizable
subspecies. They are surely not the same as lots from numerous other
localities.
Another lot but from the Moluccas seem to fit the figure and descrip-
-tion of Conus politus Weinkauff. These shells are, however, much
closer to the Sulu shells discussed above, and until I see more
of them I have simply labelled these Conus cinereus Brug.

Conus textile Linnaeus 1758- Syst. Nat. 10th ed. p.717, no.278

The preponderance of opinion among the specialists is that an attempt to name the simply countless variations of this group is impossible and an absurd waste of time. A collection containing a few dozen sets may appear to be in good order. The addition of a few thousand is certain to bring confusion rather than order.

The synonymy of the species is extensive including many outright errors.

However, in order to start a study of this group it would seem proper to select one standard form as 'typical'. The original description is brief "C. testa venis reticulatis luteis, maculis luteis fuscisque". The references are necessarily to the wood cuts of old pre-Linnean authors, and these often present a problem to guess what they really figured. These shells vary greatly in color, number and size of the white trigonal spots, the arrangement of the wavy or zigzag lines, and in fact general form.

Dodge in Mollusks of Linnaeus, Part 2, p.52 states that the figure in Reeve v.1 Conus, pl.38, fig.209 is typical of two specimens found in Linnaeus' collection, and are probably type specimens. Reeve figured this as the typical also. However, the phrase "reticulatis luteis" in the description of Linnaeus is not true of this form. It is true that many forms of textile do show true reticulations, a network of brown lines on the lighter background. The form of Reeve and mentioned by Dodge is accepted here as typical Conus textile Linnaeus.

Lamarck enumerated 11 varieties of the species in Anim. Sans. Vert. vol. vii, p.523. J. Cosmo Melvill published several papers listing many varieties. These have been studied with interest. Melville probably made as near a successful attempt as the many since his work.

Conus vicarius Linnaeus according to Dodge cannot be identified. Tomlin lists with the Ref. to Argenville t.15, f.H. It is thought to be a form of Conus ammiralis L., and the many forms of this species have added to the imposing synonymy of C. ammiralis L.

Conus vicarius Lamarck, 1810, Ann. du Mus, H.N. Paris is said to be a form of C. textile L. but is not the species of Linnaeus. Conus vicarius Brug., 1792 is C. ammiralis fide Tomlin. However, the name has been extensively used in the literature for the form of Conus textile L., figured by Reeve, Pl.38, Fig. 210, a, b. The name is in common usage and no doubt systematically incorrect as a subspecific name for a form of C. textile. Inasmuch as thousands of specimens appear in collections labelled Conus textile vicarius Lamarck, this is to be regretted, and if anything is done, in my opinion, it should be to simply list forms of C. textile L. calling them 'morphs' or 'forma' or ...

Nevertheless, the fact remains that this form is well known and is typical of the specimens with the reticulate markings. In my experience this is rather the most common form from the Great Barrier Reef, Australia, but many others are also found in that vast province.

Until further notice I propose to use this label for this form. Odd that these are really shells to call "cloth of gold".

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The following are copies of notes from labels going on lots that I have assigned to Conus textile Linnaeus- typical.

1. From Zamboanga, Philippines - A very large race in this lot- An example measures 92 mm- more elongate and less shouldered - and the dark wavy lines extend above the shoulder which is not true with most.
2. From Fiji--More or less typical markings but lighter in weight and color- white trigonal spots in greater profusion.
3. From Okinawa- This lot seems typical of the species -Ree.pl.26,f209
4. From Tahiti- Typical
5. Guam- "
6. Hayman Island, Great Barrier Reef- typical markings but a more elongate lot.
7. Bowen Reef, Queensland, Australia- This lot has finer lines- otherwise typical markings.
8. Great Barrier Reef, No. Queensland- This lot has more white the orange blotches not prominent- otherwise typical form.
9. British Borneo- probably Sulu Archipeligo though- Odd shells banded with very close lines, but otherwise typical form.
10. Mozambique, East Africa- typical form in this lot
11. Porto America, Mozambique, East Africa- A set here of a very unusual form- finer lines, and finer trigonal spots, otherwise typical markings and form.
12. Ceylon- typical in every way
13. Another lot from Mozambique Cidade- or vicinity- Another of those with fine lines and smaller trigonal spots-
14. Davao, Philippines- Very large and fine-typical.
15. Another lot from the Great Barrier Reef, Australia- Typical markings but more elongate and of a more golden color.

*** Such a list could continue indefinitely***

The following are lots I have labelled as follows-

Conus textile L. forma vicarius Lamarck

1. Mozambique, East Africa--Shell with a network of lines in the orange blotches- but far more slender than typical of this form. However, this lot was received in the same shipment with the more shouldered form that matches Reeve's figure of C. vicarius Lam. in every way. The two are now in one set for study.
2. Sulu Archipeligo- This lot is almost exactly that figured by Reeve Pl.38, f.210-white trigonal spots in great number and with the network in the orange blotches.
3. Zanzibar, East Africa - shells somewhat more slender but have the reticulate markings to fit Reeve's Pl.38, fig.210 a
4. Capricorn Islands, Queensland, Australia - typical this form
5. Island Comores, Indian Ocean- typical of this form
6. Tanga, Tanganyika, East Africa- " " "

*** This is perhaps as common as the typical species**

An occasional puzzler will appear- one small lot at hand- labelled- Conus textile L. forma ? Palau Islands, Central Pacific Shells much more slender than usual- the white trigonal spots merge and are predominant- few indications of the orange spots- and but one or two of the vertical wavy lines.

The following were lots labelled Conus textile L. forma verriculum Reeve- 1843- Icon. pl.38, sp.208. This seems to be at least a recognizable form- stubby, heavily shouldered, more ventricose and rounded, white trigonal spots larger, wavy lines not reticulate,

(con.)

Conus textile L. forma verriculum Reeve-

1. Lot from Mauritius- Typical of this form in every way by Reeve's figures.
2. Bingil Bay, Queensland, Australia- very close

Conus archiepiscopus Brug., 1792, p.747

Porto Amelia, Mozambique, Portuguese East Africa

Ref. Reeve, Pl.41, fig.223, a,b--Tryon, Man. Conch p.90, pl.30, figs. 1-3. Tryon considers this a variety of Conus textile L. These shells from Mozambique seem to be more elongate than Reeve's figures. Pattern fits descriptions perfectly otherwise. Seem to be easily separable.

Conus abbas Brug. 1792, p.750 Sulu Archipeligo

Ref. Reeve pl.28, f.162- Pl.32, f.162--Tryon, Man. Conch. p.92, Pl.30, f.12-14.

2. Conus abbas Brug., 1792-- Bougainville, New Guinea. This lot seems to be identical to those from the Sulu Arch.
3. Conus abbas Brug.- Ceylon- This lot is somewhat different but very close. The fine network predominates.
4. Conus abbas Brug.-- Admiralty Islands- Typical in markings but a somewhat smaller race.
5. Conus abbas Brug.-- Admiralty Islands- This set came to my hand labelled Conus textile var. tigrinus Sowerby, but seem to fit C. abbas rather than any form of C. textile vera. It is obvious though that this species is related to C. textile -the fine reticulations, the longitudinal lines are rarely apparent. However, the dark bands of C. abbas occupy about the same positions as the lighter on C. textile.
6. Conus abbas Brug.--Lubang Island, Philippines. Typical other than being generally of a lighter color.

Conus victoriae Reeve, 1843 Reeve Icon. Pl.37, f.202, a,b--Tryon, Man. Conch. p.91, pl.30, f.6 Type in Mus. Deshayes fide Tomlin This lot from Broome, Western Australia is fine with some of unusual size- up to 61 mm. The variation in this large set is of interest. Some have a much lower spire, certain others have a much higher and more pointed spire-- a few have a lavender shade inside the aperture whereas the great majority are pure white- some are almost entirely the fine network with the brown spots scarcely shown in any way--others are definitely banded with solid bands whereas the majority show the brown in typical spots- some bluish and dark, most of them lighter....

Conus victoriae Reeve, 1843 --South Island, Bhuket, Thailand.

Specimens of this lot are large for the species- up to 57 mm. These are obviously of the same species- network, dark spots identical- but the lot generally darker in color, and possibly more elongate.

In a study of the complex C. textile L. group there are many others to be considered--certainly the Conus omaria Brug. and its many forms or allies etc. etc. If this short paper proves to be of any interest I will submit some of my findings in these- or perhaps others such as the confused group of Conus vitulinus Brug., C. plan-orbis Born, C. pulcherrilineatus or perhaps any of many others.

Your comments are invited. At the moment the table is getting littered with some puzzles in the Muricidae, more in the Naticidae, not to mention a discouraging lot of puzzling species of the Trochidae. The one family specialist enjoys some advantages.

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Animal Behavior by John Paul Scott- Univ. of Chicago, 1958 \$5.00

This is another book on the intelligence and capacity for associative learning of animals. Of particular interest to us is one chapter on the Octopus. The question is again asked "Is the Octopus as intelligent as the higher animals?". The work contains one full page plate with seven figures illustrating one experiment. A quotation from the text may be of interest here.

"On the other hand, the octopus, which has highly developed eyes, can form associations in much the same way and with the same ease as do the so-called higher animals. A small variety of octopus lives on the sea bottom in the Bay of Naples and can be easily caught and kept in aquariums of the zoological station nearby. Two visiting scientists, Boycott and Young, decided to test the learning ability of these animals. They placed a few bricks in one end of the aquarium, and the resident octopus immediately retired behind them. Then the experimenters dangled a crab by a thread at the other end of the tank. The octopus has large pigment cells in the skin which can be expanded or contracted by nervous control. As soon as it saw the crab, the octopus turned dark, moved swiftly down the tank, captured the crab, and returned to its pile of bricks. Next the experimenters dangled a crab with an electrified white plate behind it. The octopus attacked the crab and was shocked. At this point it turned pale and retired hastily to its bricks, blowing jets of water across its arms and wiping them on the mouth region. Its next attacks were a great deal more cautious and hesitant, and after a few trials it made no more mistakes. All the animals tested learned as quickly. They simply leaned out of their bricks, took a good look to see if the crab had a white plate behind it, and then attacked or not, according to the circumstances. In other words they learned to discriminate between crabs that came alone and crabs that had a plate behind them. As we shall see, there is very little difference between this performance and that of dogs in a similar learning situation. We may cautiously conclude that the capacity for organizing behavior is strongly correlated with sensory and motor capacities."

Paleontology and Stratigraphy of Some Marine Pleistocene Deposits in Northwest Los Angeles Basin, Calif. by Peter U. Rodda-- Bulletin of the American Association of Petroleum Geologists-Vol. 41, No. 11 (Nov., 1957), pp. 2475-2492, 12 figs.

An interesting paper discussing the stratigraphy and a well stated analysis of the fossil mollusks obtained. The location is "Recent excavations made in the Cheviot Hills, Los Angeles County, Calif. -exposed fossiliferous Pleistocene strata. Two new formations occur in this area". The Lower Pleistocene Anchor silt consists of 60 feet of soft buff silts, and is unconformably overlaid by the upper Pleistocene Medill sand, consisting of 60 feet of grayish, loosely consolidated sand and gravel. 83 species of fossils, mostly mollusks are identified from five localities in the Anchor silt, and 21 species of mollusks are identified from a single locality in the Medill sand. The fauna was probably at a depth of 25-35 fathoms on a silty or muddy bottom, and in water considerably colder than that present today. The list of species is very close to that of the Timm's Point formation of San Pedro.

Dr. W.W. Sutow of Houston, Texas visited us briefly recently. He is a native Californian returning from the Pacific. He met many of the leading conchologists of Japan and gave us some interesting news about them.

[illegible]

The April 1 meeting of the Southern California Conchological Club convened at 7:30, with 32 members and guests present. Many were absent due to the heavy rains and the fact that it was Easter vacation; several members were reportedly collecting at San Felipe and other points, and we should hear from them next month.

The business meeting was held to a minimum. Mr. Kanakoff reported that his committee on What To Do About The Dodgers had decided to change the dates for the next two club meetings to the third Tuesday of the month instead of the first, as these dates would coincide with the team's being out of town. Because the baseball games are played adjacent to the Museum, parking for our meetings would be virtually impossible on the same evenings. Meeting dates for the next two months will be May 17th and June 20th; no conflict is seen beyond these two dates for some time to come.

Mr. Burch, of the Publications Committee, reported on a new Leaflet in Malacology by Dr. S. Stillman Berry, listing ten new species from the Gulf of California.

Mr. Kanakoff reported on an article "The Need to Classify", in the March issue of Natural History Magazine. This article deals with the new class Monoplacophora, established in 1957 after the discovery of a new mollusk by the Danish Galathea expedition.

Display Chairman Mr. Cate Showed a small display of rare West African shells just received on an exchange, and then introduced the Display-of-the-Month, a fine exhibit of Chitons by Mr. Emery Chace of the San Diego Natural History Museum. Mr. Chace explained how to cure the chitons in a flat position by binding them with tape to glass or plastic slides. The two main genera of chitons, it was explained, are Mopalia, characterized by a hairy girdle, and Ischnochiton, recognized by the fine scales. Many species were represented in both groups, and the members enjoyed examining the Riker-mounted specimens during the meeting's intermission.

Bernard Altshuler gave a brief talk on Ahaheim Bay Collecting Stations. Unfortunately, the outer bay area is now closed, due to a large Navy installation there. However, collecting is surprisingly good near the highway crossing because the presence of an unpleasant sticky mud keep sightseers away. Approximately fifty species were taken within a short distance from the car, about 100-200 yards apart. Thick silt covers everything in the area, making it difficult to see the shells that are there until one becomes accustomed to the unusual appearance through repeated visits. However, the shells are there; proof of this was evidenced in the check lists of shells collected which were distributed by Mr. Altshuler.

Dr. Wendell O. Gregg gave the main talk of the evening, his topic "Confessions of a Snail Butcher." In the early 1940's he started a collection of topotype material in western land shells in order to make a comparative study of the reproductive systems, saving the anatomies for later use. He keeps them in in toto mounts, which he prepares himself at the rate of 12 to 15 per month. Each one takes about 5 hrs. to prepare, so painstaking is the work involved. Dr. Gregg demonstrated the evolution of several genera of land snails by drawing a chalk diagram of a dissection of Helminthoglypta, then erasing certain sections to show how the new genera differed in anatomical structure. Dr. Gregg described a recent field trip to Western Arizona to collect 4 species of Micrariontas, and showed some of his beautifully prepared in toto mounts. All those present are looking forward with great interest to hearing him describe his technique in this field at the forthcoming meeting in June of the AMPUD. Dr. Homer King Adjourned the meeting at nine-thirty.

Jean Cate, Secretary Pro tem.

MINUTES

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JUNE

1958

CONCHOLOGICAL
CLUB OF SOUTHERN
CALIFORNIA

Subscription \$2.50 per year

Until further notice we will meet on the evening of the third Tuesday of the month at 7:30 P.M. - Los Angeles County Museum. All interested persons are welcome.

News of shells or shell affairs should be mailed to the editor-

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Home Ax 2-7965

Comments on Publications By John Q. Burch

The Cracherode Shell Collection by Guy L. Wilkins--Bulletin of the British Museum (Natural History)--Historical Series vol. 1, No. 4, London, 1957. Twenty one shillings or may be had from John Q. Burch postpaid for \$4.00. pp 8-184 and 6 plates

There is no doubt but that all California collectors will recognize the name and associate it with our well known " Black Abalone", Haliotis cracherodii Leach. However, this is incidental to the account of the rather large Cracherodean collection which was bequeathed to the British Museum in 1799 by the Revd. Clayton Mordaunt Cracherode. Specimens from this collection formed the basis of a number of new species, and certainly caused some amusing and at times acrimonious disagreements. The author in these bulletins gives us a clear account of many matters of great interest in the history of systematic conchology. A few of them will follow.

(con.)

Types (designated by Children) ?

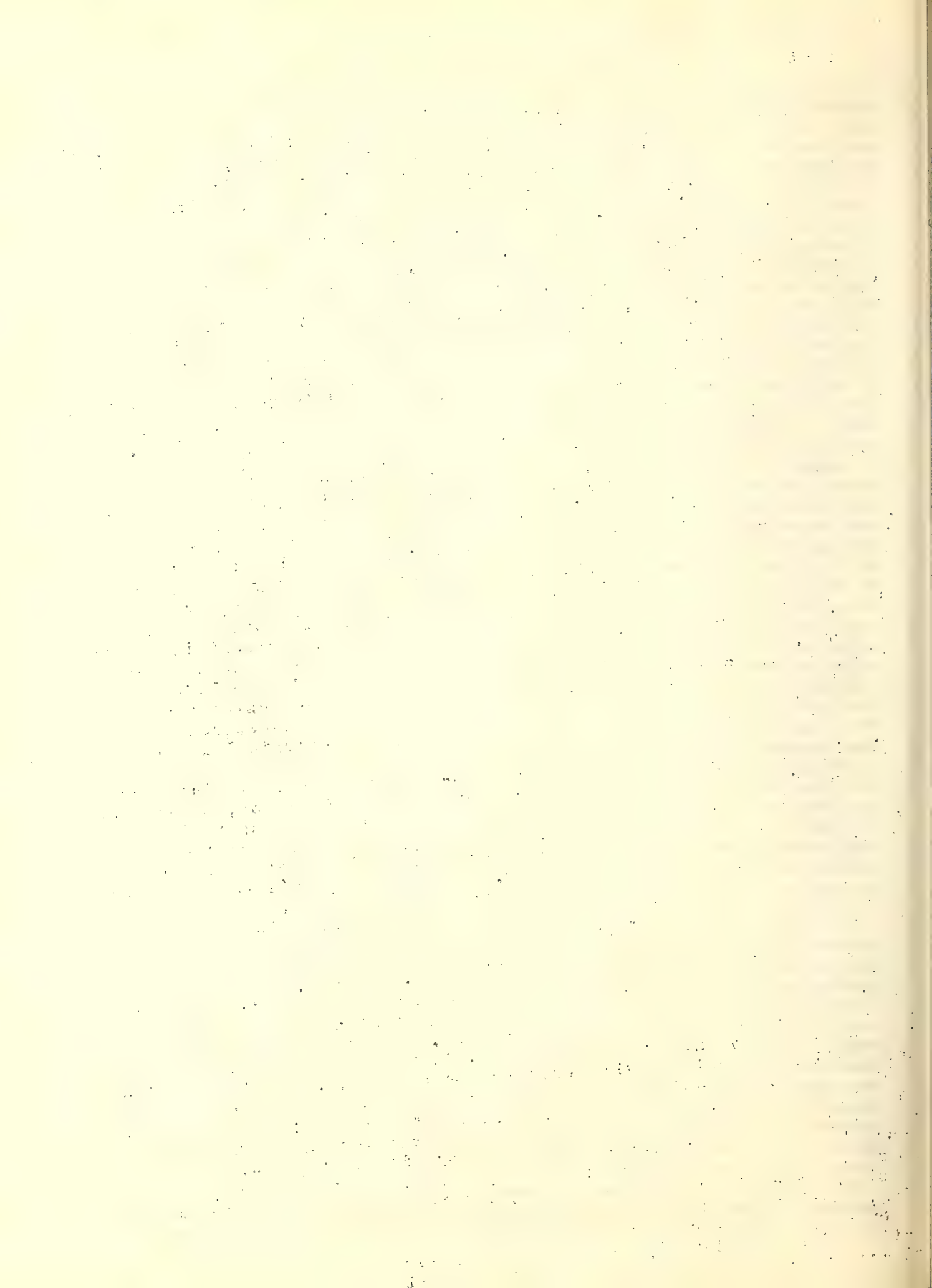
Most students of systematics are aware of the differences of opinion regarding the validity of Children's type designations. The obvious fact that eminent professional specialists disagree indicates the importance of such a discussion. While these are not mentioned by the author in this work, one example of many might be the type of the genus Conus. One group are disposed to recognize Conus marmoreus Linne' (designated by Children, 1823), whereas others disregard Children and recognize as the type species, Conus litteratus Linne' (designated by Swainson, 1840). The reasons for this lack of accord is easily appreciated. There is no doubt but that one reason for the confusion has been the fact that " Children's Lamarck " published in 1823, is an extremely rare work and has been seen by few workers. The author here gives some quotations from Children's book. By pure chance Children saw fit to use the term " type " instead of " Example ", and it seems obvious that he thought of them as the same. An example of Children's work is reproduced. ---Type. Haliotis iris (Idem. Gmel.), followed by a translation of Lamarck's original. The author here concludes on this point, " From the above notes it would seem that all Children intended to do was to give a literal translation of Lamarck's generic descriptions, together with a figure and description of one species of each genus. Nowhere in his introductory text does he say anything that would indicate that he understood the importance of designating type species, which only developed during the latter half of the nineteenth century. Indeed, in a PS. to his introductory text, the author unpretentiously notes that " we believe every genus is now illustrated with an appropriate figure " (p.259). The present importance of Children's work, however, rests mainly on his use of the word " type " rather than " example ". Whether intended or otherwise, his usage agrees with the now established rules regarding the designation of type species by subsequent authors (Article 30(g) of the International Rules of Zoological Nomenclature). "

*** Final note on this problem by JQB-- Few of us care whether the type species of a genus is a shell mentioned by Children, or another mentioned by Swainson or anyone, but we urge the experts to try to get together. The types suggested for Conus is a fair example. One species is coronated, the other is not, and this gives us two very different types for the same genus. Incidentally, Children seems to have covered many others that are not in general use. We should either use them or not, or is it an impossible dream to expect any two or more professional scholars to agree ?

Perry's Conchology

This subject is of peculiar interest to me. In fact, the author quotes this publication on p.136, not that he agrees with my findings, but it is of interest that I still have a great array of the most famous scholars of all time in my corner. The author here states, " Since the above notes were prepared, John Q. Burch of California, has published a note on the resurrection of early names in his Minutes (1955, pp.2-3), in which he makes a belated attempt to uphold the dictum of G.B. Sowerby, W. J. Broderip and his followers in suppressing Perry's names. He apparently ignores the happenings of the last fifty years, for even now he considers it presumptuous " for a student in 1955 to bring up names rejected by such scholars, thereby upsetting a century of conchology ". Others have joined in the discussion, which continues. "

However, the author here devotes some five full pages to the matter of Perry, largely critical, and I must add that I have a sincere admiration for the prose of the writer. For example, " While



it must be admitted that much of the letterpress in both the Arcana and the later Conchology is not particularly good, and the figures (although at times fantastic and of an almost dream-like quality) are sometimes excellent and clearly recognizable."

Reeve wrote some rather good ones regarding Perry. For example, in his description of Ranella pulchra Sowerby, Reeve states re Perry "That author has long forfeited the notice of scientific men by his absurd names and pantomimic display of figures." (1844, Ranella, sp.47). Again this one by Reeve is not too bad re the species known by some as Cypraea camelopardalis Perry, 1811 "If every charlatan who sets himself up as a naturalist, with brush in one hand, and writing tool in the other, is to be regarded as an authority on scientific matters; all the zoological signboards in the Kingdom might be quoted as figures of reference. For my own part, I consider the 'Camelopard' of Perry should no more enter the nomenclature of zoology than the 'Red Lion of Brentford'" (1845, Cypraea, sp.17).

There is more of the same from Sowerby, J.A. Vigers, editor of the Zoological Journal, and others. Note about Children again "it is interesting to see that the Cracherode specimen of C. camelopardalis still bears Children's label C. melanostoma."

The author here summarizes as follows, "Although no defense of Perry is deserved or intended, it may be only charitable to suggest that some of the more peculiar figures may have been due to the artist engraver's interpretation of drawings passed on to him for reproduction, with the unfortunate results so bitterly resented by Sowerby and Reeve."

*** Final note by A.Q.B.-- So we have Perry, and around and around we go, where it will stop nobody knows. I like that phrase "dream like quality", because it permits any amateur to "dream" that Perry painted a shell permitting him to rename any known species from any part of the earth. I am now resigned to see the name Perry following every genus and species mentioned since 1811. I am reminded of the beautiful figure of a Murex drawn by Julia, our store artist, for the cover of one of our many catalogues. She "dreamed" the shell. There is no such shell. Nevertheless we received numerous orders for a specimen of it. The figure should by all means have been simply assigned to Perry. In fact, his contemporaries who knew him, claim that Perry got most of his shells in that manner.

A Catalogue and Historical Account of the Sloane Shell Collection by Guy L. Wilkins--Bulletin of the British Museum (Natural History) Historical Series Vol. 1, No. 1, London: 1953 Sixteen shillings or may be had from John Q. Burch postpaid for \$4.00.

This account is of unusual interest for many reasons. In the first place it is one of the oldest collections, and many have stated that the shells were no longer recognizable. William Courten died in 1702, and his collection, said by John Evelyn to be worth £8,000 (Diary, 16th Dec., 1686), was bequeathed to Sloane. It is thought that Courten began to collect in the early 1660's. Certain of these shells were figured by Martin Lister. This collection became a part of the Sloane collection which went to the British Museum nation in 1753. There seems to be little doubt but that Lister's figures (engraved by Anna Lister) are the species we know as Fasciolaria distans Lam. However, this seems to me to be no excuse for confusing the species with Perry's fantastic "Pyrula hunteria" or any other "dream-like" reference. The Sloane collection included specimens collected by a great many early voyagers. The collection was extensively used by William Wood in his well known Index Testalogicus in which the first attempt was made to bring a practical illustrated index of

almost every species known at that time.

Among many other items of unusual interest to me is the reference and description of Voluta (Cymbiola) subnodosa Leach. The holotype is from this collection. I mention this because I have considered this species from the Straits of Magellan and Argentina to be quite a rarity, and very few of them have passed through my hands. Perhaps I am in error on the rarity of the species.

This is an interesting work, and throws light on many obscure publications.

A Catalogue and Historical Account of the Banks Shell Collection by Guy L. Wilkins- Bulletin of the British Museum (Natural History) Historical Series Vol. 1, No.3, London:1955. One Pound or may be had from John Q. Burch postpaid for \$4.00.

The names of famous collectors, famous scholars, voyagers and others are discussed in dramatic detail in this book. The great early dealer, Humphrey, and his many activities over a period of almost half a century make good reading. The work of Dr. Daniel Charles Solander is intimately connected with the career of Sir Joseph Banks. These men were contemporaries of Linnaeus and their work must be considered in the very foundation of systematic conchology.

The early history of many well known species are described. For example, Voluta aulica Solander- The discussion is very complete, and reproduces the descriptions- I. From Dr. Solander's MS, II From the Catalogue of the Portland Collection, III From the catalogue of the Calonne Collection. The author here concludes on this one, " This historic type specimen was purchased at the Tankerville sale by W.J. Broderip, and came to the British Museum with his collection, purchased in 1837. It was first figured in the Tankerville Catalogue in 1825, and later by Wood (1828), Sowerby (1847), and Reeve (1849)." This is of passing interest to me because it has been my privilege to place fine specimens of this species in a number of the rather large collections of the world. Incidentally, the variation in the species is remarkable, both in form, color and size.

Systematic Zoology

There is no doubt that there are many eager to qualify as systematists. The first requisite, of course, will be to purchase a set to date of the opinions. This is quite a simple matter. Write to the " International Trust for Zoological Nomenclature", 41 Queens Gate, London, S.W.7, England. Enclose payment of \$434.10 for the parts to date, April, 1958. Transportation will be extra. A number of other books will be very convenient also to use more or less as a lawyer uses digests of the law reports. There is no set price for future additions, and they may not be paid for in advance on a subscription basis. However, if any of this is in any way confusing, John Q. Burch will accept the commission to set you up in the study of systematic zoology for about \$500.

P.S.- Be sure to bear in mind that the above work is all carefully covered by copyright, and no portion of it may at any time be quoted verbatim.

A well illustrated article on marine shells is at hand published in Portugal in the Portuguese language- It is " O Que E Uma Concha?", by Alberto Ideias. The periodical is Diana for January, 1958.

There are 9 photographic illustrations. The paper is a general account of marine mollusks.

[The following text is extremely faint and largely illegible due to the quality of the scan. It appears to be a multi-paragraph document, possibly a letter or a report, with several distinct sections separated by line breaks or small indentations. The text is oriented horizontally across the page.]

Notices of New Eastern Pacific Mollusca --II By S. Stillman Berry.
 Leaflets in Malacology, March 28, 1958.

The descriptions in this paper are to be illustrated in the forthcoming work by Dr. Myra Keen. No figures are given here, but the species are carefully described and compared by the author. The systematic relationship of those mentioned here is stated, but it is perhaps as well to wish for the publication early this fall of Dr. Keen's comprehensive coverage of the entire fauna.

The species described here as new are:-- Tiphycocerma preposterum (new genus and species), 2. Muricanthus callidinus, 3. Olivella (Olivella) fletcheriae, 4. Olivella (Maagintella) walkeri, 5. Gemmula hindsiana, 6. Tiariturris spectabilis (new genus and species), 7. Knefastia walkeri, 8. Turrigemma torquifer, 9. Terebra (Strioterebra) fitchi, 10. Hormospira (new genus)--Generitype: Pleurotoma maculosa Sowerby.

Annual Shell Show- St. Petersburg Shell Club, Florida-

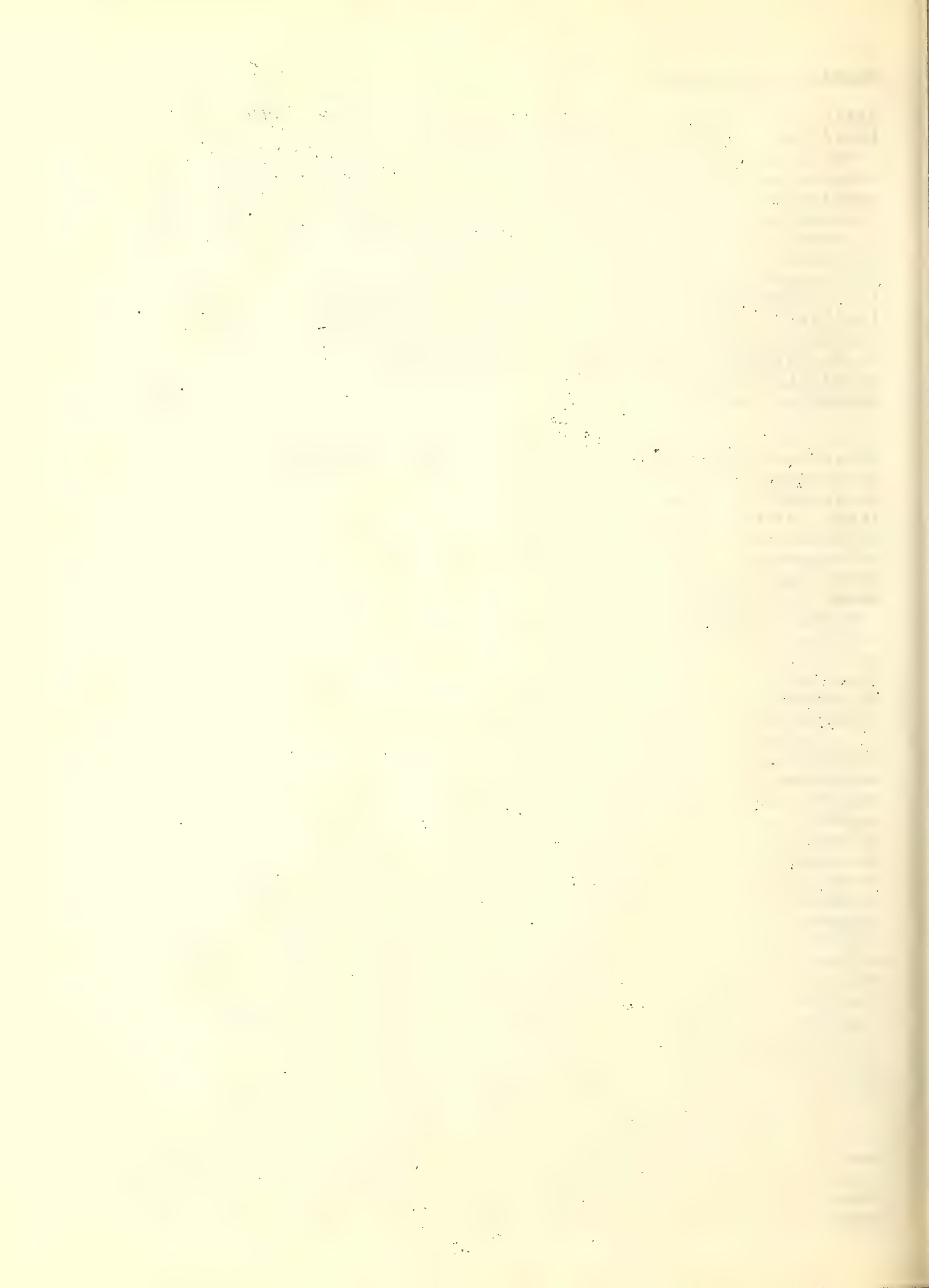
We are always full of admiration and no doubt some envy of the continued success of these shell shows. This was the 11th annual show, and the word we have had is that each show is better than the last. We are pleased to read that the winner of the annual Smithsonian Award, top honor in the show, is Mrs. Z.W. Craine of Norwich, N.Y., member of the local shell club and of the Philadelphia Shell Club. The winning exhibit was a collection of specimens of the genus Cancellaria.

A full account of the many other awards is proof that the show was a great success in every way.

Mrs. Tui Henderson, President of the Hawaiian Malacological Society is spending some time in Los Angeles, and it was our privilege to enjoy a visit one evening and dinner,

This is simply too much. I rebel, and flatly refuse to accept the suggested change of name for my pet family of Jays. In fact, I was out to see them about it this morning. They keep house in the large walnut tree at the rear of our home. They are beautiful birds (even if a bit boisterous at times), and I consider it a base insult to even mention the word " Scrub" in referring to my little friends. This outburst is caused by a letter from Bob Talmadge-- part of which follows-- " Shame on you, John, for not keeping up with the changes in the names of our birds. We no longer refer to our old familiar standby the California Jay as the Aphelocoma californica; rather it is the Scrub Jay, A. coerulescens. However, that is not half as bad as the Empidonax flycatchers. Some one discovered that the type of the Wright Flycatcher was actually a specimen of the E. griseus, or Grey Flycatcher or some such. This left the one that we had been calling the Wright's Flycatcher without a name, so the name, oberholtzeri was brought forth and dusted off-- I am not sure myself now what or how they run-- I haven't checked on them in the last few months." *** So the bird people are at it too.

Let's hand the Linnean system to the true scientists for a bit of fun-- I can imagine the author chortling " In my new book I have changed the name of the sun, the moon, the planets, and all the known stars. They will have to close down White Sands until they study my new book. But, Hey-- What are those fellows in the white coats and butterfly nets gathering around me here for ?"



Notes on the Megatebennus bimaculatus Dall
By Robert R. Talmadge

The chance discovery of a specimen of the Megatebennus bimaculatus Dall, at Trinidad, California, On May 4, 1958, gave the writer a chance to observe the living animal. The following notes on the external anatomy, before preservation, may be of some use or interest to others interested in the family Fissurellidae.

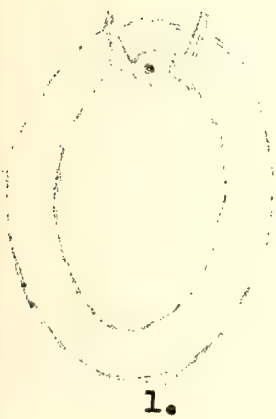
The reefs in the Trinidad area often possess a headland of one or more massive rocks, fissured and cleft, behind which the broken reef fans out to the shore. The specimen was taken from a vertical face in one of these narrow clefts, and when found was about one foot above the surface of the water at a minus 1.7 tide. The reef is well protected by the Trinidad Head from the prevailing northwest winds and swells, and on this date the surge was at a minimum.

When first noted the animal appeared to be yellowish in contrast to the grey overgrown rock. A fleshy mantle from which protruded two stubby tentacles, with a dark oval area on the dorsal surface was the first impression. A more critical examination under a hand lens revealed other interesting features. The animal is subcircular and rather elevated, and resembles none of the other species of the Fissurellidae found along the California coast. As the shell has been described so often, no details will be given here.

Under the lens the dorsal surface was rather granular, increasing towards the periphery, where the mantle became rather closely wrinkled. A series of dark brown rays, radiated from the shell to the periphery, where they became diffused to form an almost complete dark band. It appeared that the dark rays were depressed, the lighter or yellow areas elevated, with tiny dark nodes still more elevated, spaced along the lighter rays.

Ventrally the animal was yellow, with the pedal coarsely granular. Beneath the mantle, there was a slightly roughened area, which in some portions was more roughened than in others. Pilsbry, Manual of Conchology, Vol. XII, 1890 refers to the specimen that he used in describing this genus as being all brown, but he qualifies his statements with the information that his specimen had been long in alcohol and was much contracted. He also refers to the epipodial area, and could find no trace of papillae on the epipodial line as described by Dall. On this living example, the slight granulations might be considered as papillae by Dall, and not noted by Pilsbry. As mentioned above, this granulation was not uniform, and it is quite possible that additional specimens would show considerable variation.

The shell of this specimen was removed and the anatomy preserved in alcohol. It was noted that within a few hours the coloration of the animal had started to fade with the dark rays fading as rapidly as the yellow areas. It will be interesting to note the degree of color variation within a six month and a year periods.



1.



2.



3.

The following measurements are given:

Animal: Length 35mm, width, 30mm, height including shell, 15mm.

Exposed shell: Length, 16mm, width 8mm, Orifice, 10mm by 5mm.

Shell when removed. Length, 20mm, width, 12mm height, 6mm.



4.

L I N E D R A W I N G S

1. Ventral, from life
2. Dorsal, from life
3. Lateral from life
4. Detail of mantle, dorsal.

Robert R. Talmadge
Willow Creek, California

1

Conus achatinus Brug. 1792 and Conus monachus L. 1758
By J.Q.B.

Some readers may have specimens in their collections that we have labelled with both of the above assignments. An explanation of the situation is far from simple without specimens before you. Perhaps a few references under each heading may be in order with a sincere request for the opinions of others.

Conus achatinus Brug., p.671, 1792

Tomlin: Cat. of Rec. & Fossil Cones- states " Ind. Ocean. Cannot be separated from monachus L."

** More about this concept of C. monachus L. below.

Reeve in Conch. Icon. Pl. XXXV, Species 191, Figs. a,b.

** Excellent figures of the species I recognize as C. achatinus - shells encircled with blackish dot-interrupted lines ...

Tryon- Man. Conch. Conus p.64, Pl.20, figs. 11,12

** Description and figures of Tryon agree with Reeve and others.

Both Tryon and Reeve consider C. achatinus Brug. not to be conspecific with C. monachus L. (or the species they knew as monachus)

Bernard C. Cotton in his " A Catalogue of the Cone Shells(Conidae)" Rec. So. Aust. Mus. 1945- recognizes both forms as separate species and gives many localities for both.

A few large sets before me may be mentioned here-

<u>Conus achatinus</u> Brug.	--Bali, Indonesia	The largest I have seen and
		no doubt the finest- close to 3 inches
" "	Zamboanga, Philippines-	
" "	Broome, Western Australia-	Long series, typical

Conus monachus L., 1758, p.714, Hab.?

Tomlin makes no mention other than the above,

The controversies regarding this name have been very well stated by Henry Dodge in his " Mollusks of Linnaeus" Part 2, Bull. Am. Mus. of Nat. Hist., vol. 103: Art 1, 1953. The conclusion reached by Dodge is that Conus monachus L. is, in fact, the technically correct name for the well known Conus mediterraneus Brug. and erroneously applied to other species including the species from the Indo-Pacific under discussion. IF Dodge is correct, the question to be asked at this point is simply this- Is the species we have been labelling C. monachus from the Indo-Pacific really separable from C. achatinus Brug. and if it is distinct either as a species or a subspecies, what name should we give it ? The synonymy of such a variable lot should fill pages giving us no end of available names from which to search out the oldest validly applied.

The following will be a brief account of the concept of the species from the Indo-Pacific now well known as--

Conus monachus L.

Tryon, Man. Conch. p.64, pl.20, fig.14 recognizes it as separable stating " Narrower at the shoulder, thinner, usually without the dotted revolving lines of C. achatinus although a few such lines are sometimes vaguely apparent".

Reeve- Conch. Icon.-- Pl. XXII, Species 122, Figs. a,b,c. Reeve states " The Conus monachus is very closely allied to Conus achatinus it may, however, be readily distinguished by not having any of the interrupted transverse lines which characterize this species."

** Reeve's figures agree with the specimens before me so labelled. Bernard C. Cotton (cite supra) recognizes C. monachus and lists the species from Solomon Islands, Loyalty Islands, Misami, Mollucas, Fiji ...

(con.)

A few sets before me may be added here-

Conus monachus L. (Indo-Pacific concept of the species as discussed)

" " Solomon Islands- Match Reeve's figures and others separable from C. schatinus Brug. by the lack of the transverse lines- otherwise indistinguishable.

" " Set from N.W. Australia- also typical this form.

** None of my shells from the Philippines seem to me to be of this form- all fall easily under C. achatinus Brug., but with considerable variation.

Final note on this problem. It is not surprising that I have received many sets of this complex labelled as various forms of Conus magus L. This is another story, and easily appreciated. The synonymy of Conus magus is probably larger than that of any other species of Conus. Variation in color patterns may be accepted without too much study, but the many forms placed in the species C. magus by authors vary greatly in shape as well. If it is true that a long series will show intergrading variation between all of these, then in my opinion, the C. magus group will prove to be the most difficult of all. I am accumulating them for future study, but one glance will leave you incredulous.

However, my idea of typical Conus magus L. is the elongate form so common from the Philippines, and all are to be separated from the species discussed above by being more shouldered, the convex spire and the distinctive apex.

It may be of passing interest that Peile placed all of the above along with Conus striatus L. in the same group based on almost identical radular characters.

Publications Received

The Nautilus- Vol. 71, No.4, April, 1958- The following papers- Rediscovery of a rare Caribbean Conus. By R. Tucker Abbott

The species is Conus armillatus C.B. Adams, and formerly relegated to the synonymy of other species.

Ellobiid and Other Ecology in Florida By J.P.E. Morrison

It is of passing interest to note that the habitat of such genera as Truncatella and Pedipes seem to be very different from that of the species we know on the coast of California.

Additions to Texas Marine Mollusca By Donald R. Moore

Studies on Mollusk Populations IIIa By R. Stohler

This is an interesting paper on the variations of several species of the genus Tegula from the California coast. One plate with 9 figures is well done.

Marine Shells of Illinois Indian Sites By Paul W. Parmalee

Report on Conus bermudensis Clench By T.R.A. Nielsen

Land Snail Dispersal By H. Burrington Baker

This is a very interesting paper and especially to those of us who have puzzled over the methods of dispersal of many of our island and desert snails.

Status of Newcomb's Achatinellid Names By Arthur Haddleton Clarke Jr.

*** Under Notes and News** Allyn G. Smith and Mackenzie Gordon Jr. have given corrections and new names for certain species-

Turbonilla (Bartschella) bartschi Smith and Gordon described in Mollusks and Brachiopods of Monterey Bay ... 1948, Calif. Acad. Sci.- was found to be preoccupied and replaced by T. (Bartschella) bartschiana, also found to be preoccupied and therefore the name here given is T. (Bartschella) pauli- new name.

Proceedings of the Malacological Society of London- Vol. 33, part 1 March, 1958-

This issue contains a number of papers of unusual interest. Torsion and the Adult Snail; A Re-Evaluation By J.E. Morton

A well written paper of 10 pages and 4 text figures. The widely held view that torsion, arising as a mutation of high selective value to the larva, has no adaptive role and may be actually disadvantageous in the adult gastropod. The author makes a good case for the theory that torsion is in fact a great advantage to the adult.

The Worm-Eating Slugs Textacella scutulum Sowerby and T. haliotideae Draparnaud in Captivity By Barbara M. Stokes.

This is a very thorough paper pp 11-20 and 1 pl. Vasconiella jeffreysiana (P. Fischer) By B.S. Kisch pp 21-24 and one plate. This species of the Galeommatidae has been little known and this paper clears this matter thoroughly.

Observations on Petricola carditoides (Conrad) By C.M. Yonge

Inasmuch as this paper is devoted to a California species it is of unusual interest and value to us. pp 25-30 1 pl. The life history, anatomy, and shell are carefully described and figured.

Observations in Life on the Pulmonate Limpet Trimusculus (Gadinia) reticulatus (Sowerby) . pp 31-37, 4 text figs., 1 pl.

By C.M. Yonge.

*** This is another of our well known California species, and while Professor Yonge has covered the anatomy and habit of the species, there are a few curious questions to be asked. The anatomical characters are discussed in a scholarly manner for which the author is well known. However, one statement is so definitely made that perhaps a comment is in order. It is "Unlike the numerous local species of Acmaea it never occurs fully exposed on rocks but occupies much the same habitat as the mesogastropod and sessile limpet Hipponix antiquatus found on these same shores (Yonge, 1953)."

In my personal experience I have collected numbers of them from open rocks of many localities including the wave beaten rocks of the breakwater at Playa del Rey, also the breakwater at Santa Monica, and in countless other localities usually above the high tide, but certainly not in the protected crevices in which we expect to find Hipponix. I have always been a little skeptical about the record of the large set in the San Diego Museum left by the late Dr. Fred Baker stating that they had been dredged alive off South Coronado Island in 3 to 8 fathoms. However, the ability of such species to surprise the collector is well known. The Williamia peltoides (Carp.) cannot be very distant systematically, and this species is little short of amazing for a presumably air breathing species. There are many records of having dredged them from rather deep water. My own experience has been to take them from high in the intertidal zone down to as deep as 75 fathoms. J.Q.B.

One other casual query re the taxonomy- I accepted Dr. Rehder's paper (Biol. Soc. Wash., 1940) and changed all labels from the old and well known Gadinia Gray, 1824 to Trimusculus Schmidt, 1818. This seemed to be sound priority. However, I placed Gadinia in the synonymy. Dr. Rehder designated Trimusculus mamillaris (Linnaeus) (Patella mamillaris L.) by subsequent designation as the type. The author here would seem to accept Gadinia as a subgenus of Trimusculus.

A Reconsideration of the Relationships of the Monoplacophora and the Primitive Gastropoda By J. Brookes Knight. pp 37-48, 1 pl.

The earlier paper by the same author has been extensively studied and discussed --1952, "Primitive fossil gastropods and (con)

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County of [illegible] the sum of [illegible]

for the purchase of [illegible]
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the sum of [illegible]
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their bearing on gastropod classification: Smithsonian Misc. Coll. 117, 56pp, 2 pls."

In this paper the author has written a scholarly report on the effects of the much discussed discovery of the supposedly extinct Monoplacophora (Lemche, 1957). This has been the subject of some excellent reports to our own groups. George Kanakoff of the Los Angeles County Museum spoke on this matter at the A.M.U.P.D. meeting in Santa Barbara last year and passed out mimeographed copies of his excellent paper to all present.

Simply stated for the benefit of those who have not followed the matter, the Monoplacophora is a group of mollusks which has not undergone torsion of the body characteristic of the gastropods.

A proper review of this important paper by Dr. Knight would be impossible here if indeed this editor is capable of doing it justice. There is no doubt but that we will hear much more about it from better qualified students.

Venus- The Japanese Journal of Malacology- Published by the Malacological Society of Japan- 33 2 Feb., 1958.

The papers in this excellent journal are either in both the language of Japan and English, or have a summary in English. The text figures are without exception well done. Papers in this issue follow.

Two New Species of the Family Trimusculidae from Japan and Formosa By Tadashige Habe. The species are Trimusculus yamamotoi and T. kurodai--

On a New Species of Xancidae, Ceratovarcus elongatus (Gastropoda) By Kin-ichi Sakurai

On the Aberrant Genital System of Aegista geniosoma (Pilsbry et Hirase) By Masao Azuma

Anatomical Studies on the Japanese Land Snails (9)-Aegista (Neoaegista) trochula (A. Adams) and Aegista (Lepidopsium n. subg.) verrucosa (Reinhardt) By Tadashige Habe
-do- No. 8 "Reviews of Helicarionidae (4)"

Descriptions of Four New Bivalves from Japan By Tadashige Habe
Mimacarda matsumotoi-- (Arcidae)--Alucinoma soyae (Lucinidae)
Paraborniola matsumotoi (Erycinidae) --Ostrea setoensis (Ostreidae)
Troglobiontic Aquatic Snails from Japan By Tokubei Kuroda

This is a review of the entire group with keys to the species and illustrated with two clear plates showing 18 figures.

On the Limestone Caves of Akiyoshi Terrace, Yamaguchi Prefecture, and the Land Shell Fauna of the Environs (A Preliminary Note) by Goro Okafuji

On the Remarkable Sexual Dimorphism of the Radula of Drupella By Kohman Y. Arakawa *** This paper is of rather unusual interest to me because it is the first to come to my attention in which a study of possible sexual dimorphism is made to account for the variation in radulae. The plate is excellent- 15 figs.

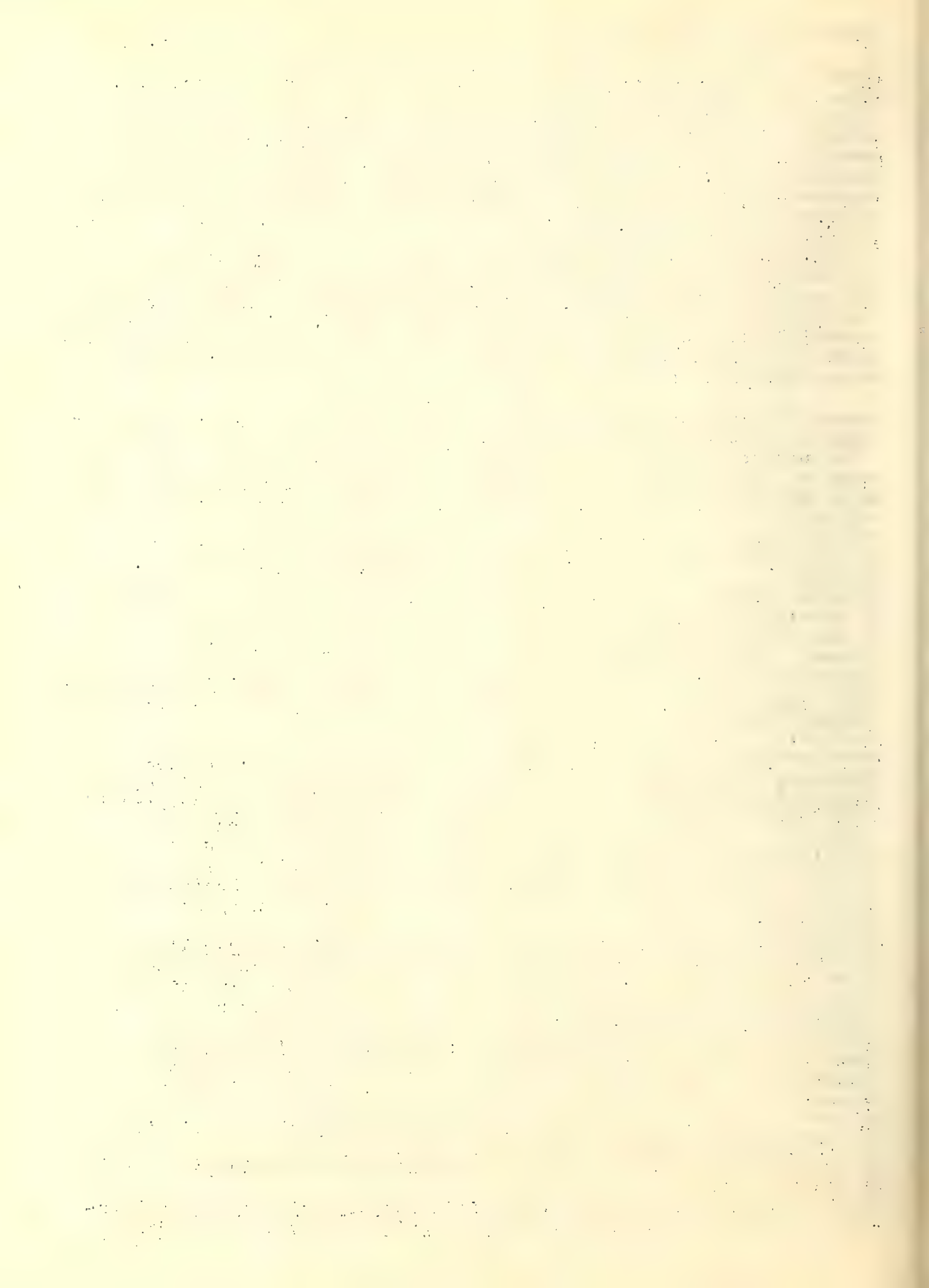
Identification of Larva of Pinctada martensi By Yataro Tanaka
Some Observations on the Breeding Habits of a Whelk, Neptunea (Barbitonia) arthritica Bernardi By Takaya Iuchi and Mitsuharu Miyawaki

On the Breeding of Periwinkles, Littorivaga brevicula (Philippi) and Littorivaga atkana (Dall). By Yoshio Kojima

An Observation on the Spawning of Nodilittorina granularis (Gray) By Yoshio Kojima

On the Floating Egg Capsule of Periwinkles, Littorina squalida Broderip et Sowerby and Nodilittorina pyramidalis--By Yoshio Kojima

(con.)



Distribution of Corbicula sandai in Seta River, Shiha Prefecture

By Kazumada Hayashi

A New Miocene Gastropod (Cerithiopsis hataii n. sp.) from Iwate Prefecture, Northeast Honshu, Japan By Shigeru Aoki

On the Miocene Molluscs from the so-called Taki Formation in the Joban Coal-Field, with the Description of Cerithidea sugaii n. sp.

By Atsuyuki Mizuno and Shoji Fujii

Conditions of the Penguin Pearl Culture in Amami-Oshima By Shohei Shirai

A History of Japanese Conchology (37) Tazima Kanamaru

A New Recent Species of Tudicula From Zanzibar (Gastropoda: Vasidae) *****

By R. Tucker Abbott- Notulae Naturae, No. 305, April 25, 1958

The Acad. Nat Sci. Phil.

The new species is Tudicula zanzibarica new species

On the Occurrence of Achatina stuhlmanni v. Martens in Kenya By T. Pain- (Rev.Zool.Bot.Afr. XVI, 304) Dec. 1957

This is a very thorough discussion of this species, and of some interest because of the extensive range. I have had the shells on numerous occasions but always from the Belgian Congo.

American Association for the Advancement of Science- Pacific Division Meeting- Utah State University, Logan, Utah- June 16-20, 1958.

A good number of our members plan to attend because of their interest and activity in one or more of the affiliated organizations.

Conus textile forma vicarius Lam.

Having discussed this form of the C. textile group in Minutes 177, pp 4-5, this brief note should perhaps be added to the data. The variation in this lot was called to my attention by Mrs. John Q. Burch while examining a substantial number of very nice specimens just received from Green Island, Barrier Reef, Australia- North Queensland.

The great majority of these specimens are banded in the lower middle band by having a small dark row of the lined orange spots in the middle of the white trigonal spots. This difference would seem to mark this lot as a local race.

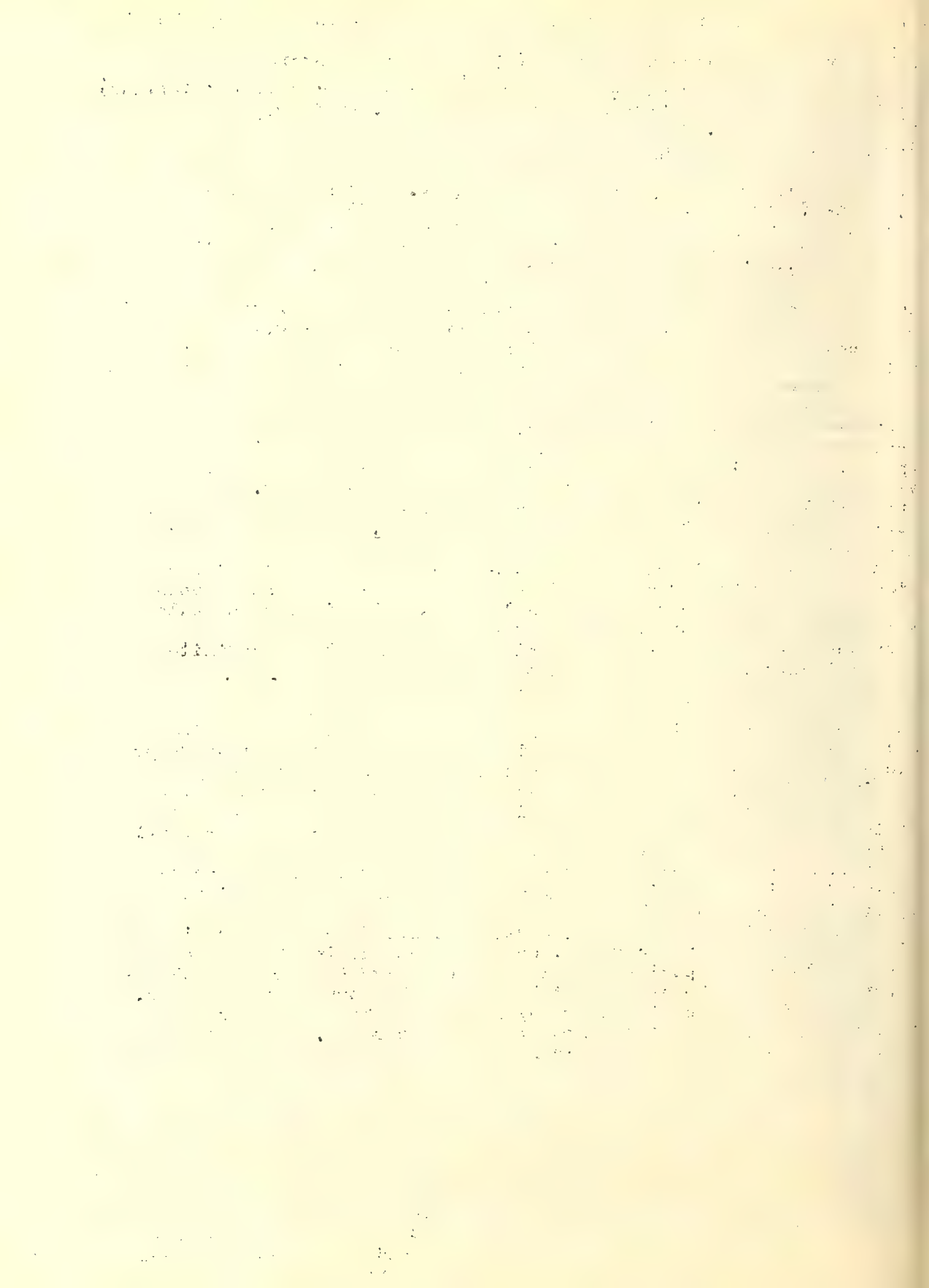
Another item of interest is that some of them show a definite pink interior instead of the customary white. By J.Q.B.

Brief Note on the Legality of the Above

It seems obvious that if we accept the conclusions of Henry Dodge and others (and all evidence indicates that we should) that Conus vicarius of Lamarck is not the same ~~XX~~ species as Conus vicarius of Linnaeus, then the use of Lamarck's name even as a subspecies is clearly a violation of Article 11 of the International Code of Zoological Nomenclature to the effect that specific and subspecific names are all subject to the same rules etc.

Nevertheless, it seems to me that of the many rules constantly violated, this one is ignored by a greater host of professional specialists than any other.

I consider the case at hand merely a color form or ' morph' and of no genuine systematic value, but the fact remains that I receive sets regularly of specimens in many groups and from some conchologists of repute who use varietal names well known to be homonyms. They are quick to mention synonymy for a well known species, but seem to consider varietal names of color forms etc. as a matter of no concern to the Rules. How come ?



A brief check of my annotations to the Rules brings up some rather amusing references. A few will follow. Obviously, a fully annotated set of the rules would make the United States Code Annotated in 68 volumes look like a handbook by comparison.

In honor of the sacred rule of "priority", this paper might be fun to consider. It seems to be the oldest in this file. Bryant Walker, Journal of Conchology, Jan., 1909. This paper was no doubt written a good 50 years ago, and the International Rules had not then been fully accepted. A few random quotations from his comments on Article 11 mentioned above may be of interest. Walker did not live to see his worst fears multiplied to the nth degree.

Quote-" On the other hand, the enforcement of the rule (and it should never have been promulgated, if it was not to be enforced) will result in the renaming of hundreds of well recognized varieties, and the creation of an equal number of unnecessary synonyms. All for no practical purpose, except perhaps the enhancement of the fame of the closet naturalists at the expense of those, who in good faith and in accordance with the recognized usage of their day have done original investigation."

" Multiply this by the cases of duplication of varietal names in the whole Palearctic Fauna and a whole volume would be required to record this wholesale slaughter of the innocents."

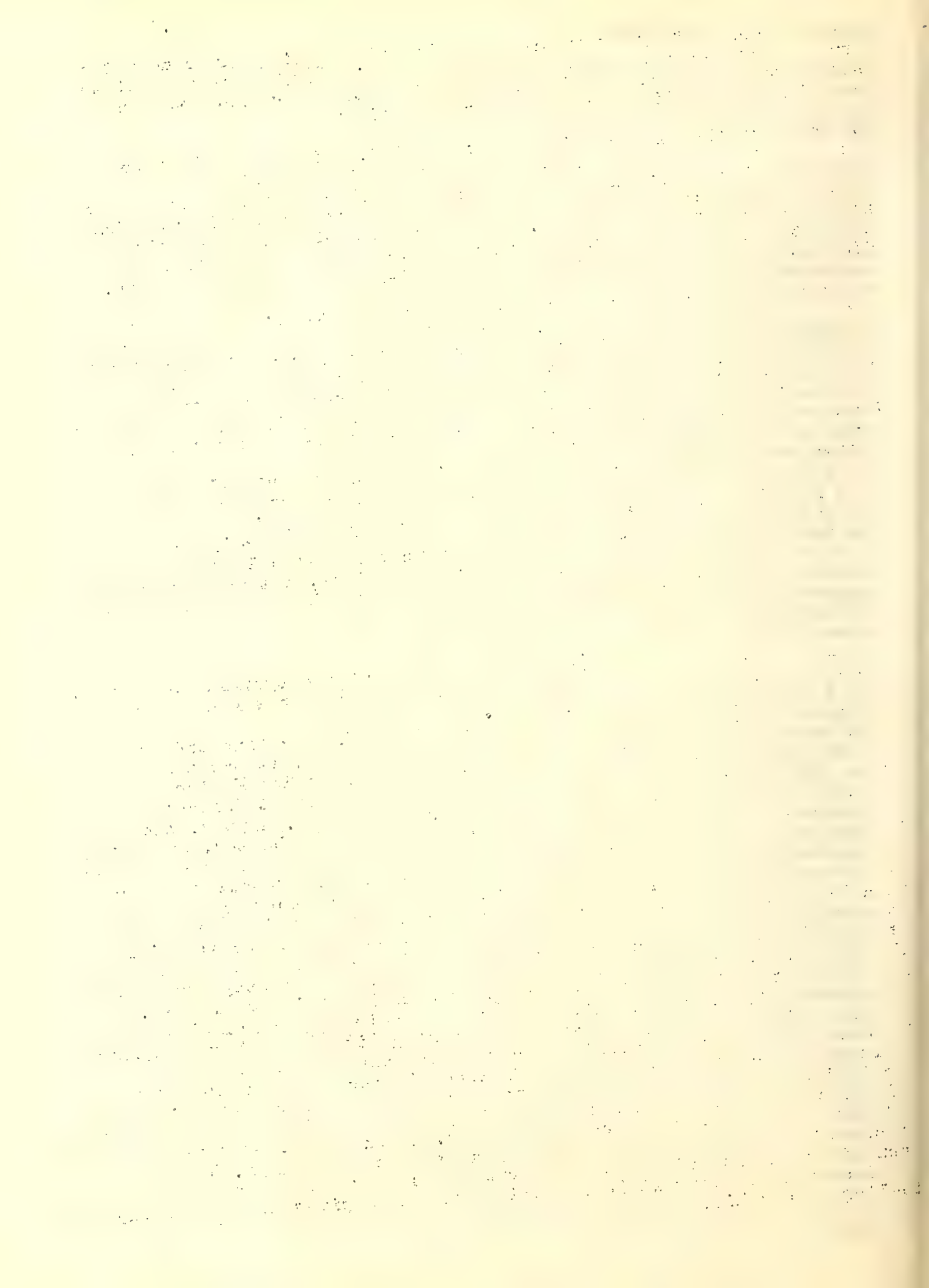
" The modern system of nomenclature by process of evolution has become a science, so elaborate and intricate, that only the most expert are capable of applying it, and even they, not infrequently, are entirely at variance as to what name should be used in a given case." End Quote

THE SYSTEMATIST

If I have had a bit of a laugh occasionally at the systematic experts please be assured that I love them just the same. They are so human in being wrong so much of the time.

The most unforgivable thing is to be right all the time and able to prove it. I recall an occasion apropos of this. It was many years ago and I was living and in business in Mazatlan, Mexico. Several of us were sitting around a table in the Hotel Central sipping tequila- or wait, maybe that was soda water. Anyway, one of the boys was reading a paper and asked " What is alabaster, anyway?". I recall taking a swing at it by saying " I think it must be something like plaster of paris. Seems as if I have heard of statues or something made out of it." (Incidentally, JQB had a record on such miscellaneous matters of science that should recommend him to the Los Angeles Dodgers. Poor Dodgers-- their batting average is still at the bottom of the league.) After a couple more had made guesses almost as bad, one of them said, " Let's ask the human encyclopedia," and called to a heavy set man seated at a small table by himself. This was my first introduction to this character. He leisurely came over to our table, and after expressing his shock at our abysmal ignorance, gave us the chemical formula for alabaster, told us where it is found and mined, and finished by reciting a poem about the " Alabaster Halls" of something or other. I learned later that this chap had an MA from one of the large universities, but he must have committed the encyclopedia to memory. He had the most remarkable memory of any man I ever knew, and you can guess the rest. He was shunned by one and all, and as unpopular as he was brilliant. A fellow who is wrong at least part of the time gives us a brotherly feeling toward him.

JQB



Voluta (Aulica) aulica Solander

In checking recent arrivals of Voluta aulica Sol. from the Philippines against those already in the collection, it is interesting to note the variation.

In Thes. Conch. (page 198), Sowerby describes the species and figures two varieties of the seven described by W.J. Broderip (Part X of the Proc. Zool. Soc.). To me this species is as variable as the beautiful but common Voluta vespertilio L.

Voluta aulica is brightly colored and has a smooth protoconch. Shape: slender to broad, shoulders nearly smooth to "armed with tubercles and spines." Color: flesh color marked with red spots and lines to a solid red with a darker double narrow row of color around the body whorl. No two in the later group are the same in shell form, all have the same deep red coloration.

The following measurements are of three specimens of the solid red with two narrow dark bands:-

115mm x 68.4 8 heavy spines

112.2 mm x 52.4 mm 8 short spines

96.2 x 50 mm 9 short spines

The smallest specimen in the lot measures 39.6 x 20.3 mm, and is a variation of flesh color and red. By Mrs. John Q. Burch

THE FUTURE OF THIS PUBLICATION By J.Q.B.

This issue concludes the 18th year with John Q. Burch as editor. Last year this matter was placed before the membership and the readers with the comment that the Minutes were obviously becoming more and more a monthly letter of the passing whims and ideas of one writer, J.Q.B. The response was encouraging, and surprisingly enough, our subscription list has increased.

A number of worth while papers were contributed by other members during the year. Nevertheless, this is a fair warning. In the absence of new material to publish, you may expect more of J.Q.B.

Inasmuch as an invoice for the 1958-59 subscription \$2.50 is enclosed, the response may be something in the nature of a ballot. The fact remains that this paper is one of very few entirely financed by those who wish to support it.

New Publication

Johnsonia- Vol. 3, No. 37, May 8, 1958-

The Family Phasianellidae in the Western Atlantic By Robert Robertson. pp 245-284

We always expect an excellent paper when another installment of Johnsonia arrives, but there are occasions when the work is so preponderantly Western Atlantic that it soon joins the many other scholarly contributions on faunas of at least secondary interest to many of us. However, in this paper, anyone who will study the impressive tabulation of data on the entire family requiring the first ten or twelve pages of this report, will certainly list this work among the first references for any future study pertaining to this family regardless of the fauna.

The last two pages are devoted to a clear statement of the matter I raised a time or two- "The Museum Boltenianum or the Bolten Catalogue" By Ruth D. Turner. There is certainly no question about the fact that this work has been declared nomenclatorially available. It should be accepted or Opinion 96 repealed. This is apparent. My observation was to call attention to the fact that a number of recently published books from Europe simply refuse to obey Opinion 96. The professionals quarrel among themselves on this matter.

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